

MANUFACTURERS' RECORD.

[Name Patented 1889.]

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XXIII. No. 12.
WEEKLY.

BALTIMORE, APRIL 21, 1893.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

The Iron Ores of North Carolina.

I.

Apart from the magnetic ores along its eastern border, comparatively little attention has been given to the iron ores in North Carolina until within the past few years, when the extensive development of the Cripple creek section of Virginia and various railroad extensions have caused more attention to be paid to the other ores of the central and eastern sections. The excellently organized geological survey of this State, aided by generous appropriations, has brought the matter still further into attention, and the "Handbook of North Carolina," published by the State board of agriculture, has in it a brief review of the iron belt which is of interest.

In every part of the State, and in great variety, are found magnetic ore, hematite, limonite and some siderite. Those from the older formations are commonly free from phosphorus and sulphur, but sometimes contain titanium, etc.

A cursory survey of the geographical occurrences may properly precede this description. The ores of the Quaternary are limonite, and in deposits shallow and of limited extent.

In the upper Laurentian and the Huronian are: Gaston and vicinity, in Halifax county, five points; Granville and Person counties, several localities; Durham county, beds at Red Mountain, and at Chapel Hill, in Orange county; in Chatham county in six veins at or near Ore Hill and at Buckhorn Falls; in Randolph and Montgomery counties in at least twenty-five localities.

The Tuscarora and Highfield ranges in Guilford and other northern counties occur in a belt more than thirty miles long. Commencing in Iredell county and extending through to Gaston county and far into South Carolina, a stretch of nearly sixty miles, is a still more remarkable belt. Near Danbury, Stokes county, is a belt quite similar to the above.

Surry and Yadkin counties have several localities; Burke, McDowell, Rutherford, Caldwell, Alexander and Wilkes have numerous beds; in Ashe county are three belts; in Mitchell county is the famous Cranberry deposit. Other beds of magnetic ore exist in the same section, and, in truth, so numerous are these localities in Buncombe, Madison, Jackson, Haywood, Mitchell, Macon and Swain counties, that they have hardly become known outside of their respective neighborhoods.

The iron deposits of Cherokee are largely of the limonite variety. The coal measures of the Deep river region contain beds of argillaceous carbonates and black-band ore. It will be observed that few parts of the State are destitute of iron deposits. These mines will be grouped geographically for more detailed statements.

Limonite Ores of the East.—The earthy accumulations of this section in the Quaternary and Tertiary frequently contain beds of earthy or nodular limonite. A deposit occurs in Nash county, near the Wilson line—the Bloomary mine—where blooms have been made on some scale. At Boney's, near Wallace, in Duplin county, is another deposit. A bed is also found at Rocky Point, Pender county, and on Tranter's creek, in the eastern part of Pitt. Edgecombe, Halifax, Pitt and Robeson show

several other localities. They are found in shallow basins of slight extent, and rarely contain any large amount of ore, which ranges in contents from 40 to 55 per cent. in iron, and without injurious amounts of either sulphur or phosphorus. Picking and washing raises this occasionally to 60 per cent., and makes an ore suitable for shipping, or for treatment in the catalan forge, for the production of superior iron for local use.

On both sides of the Roanoke river, near Gaston, in Halifax county, are five localities occurring over a stretch of territory five miles long, and the scattered "float ore" as far south as Hines's plantation would indicate an even more extended range. Only two points have been worked, the ore from which is of good grade and great purity—iron 53.31 to 58.73 per cent., sulphur none to 0.03 and phosphorus none to 0.05 per cent. It inclines to be granular, and consists of both specular and magnetic iron. Other less known places are near Smithfield and Leachburg, and at Whitaker's, seven miles southwest from Raleigh, at both of which places are notable outcrops of limonite. The metallic resources of these recent formations have been little investigated.

The Buckhorn mine, on the Cape Fear river, in the western part of Harnett, is a magnificent deposit of manganiferous hematite occurring on a hill 200 feet high. The vein is from twenty to thirty-six feet thick. The ore is admirably adapted to the manufacture of spiegeleisen, and carries:

	Per cent.
Iron.....	55.00 to 66.50
Manganese.....	5.23 to 15.87
Phosphorus.....	.02 to .04
Sulphur.....	.02 to .06

One mile southwest is another locality of similar character, the Douglas mine; two miles north is the Dewar mine, and one mile northwest is the Pegram mine, a vein of magnetic ore with 4 to 6 per cent. of manganese. The iron manufactured from these ores makes a very superior material for car wheels, etc. This range extends ten to twelve miles southwest, and several places are known yielding a fine and rich magnetic ore.

The Triassic, immediately adjoining the Quaternary on the west, and extending for about 125 miles from Durham county southwest to Anson, and with a recognized width of five to twenty miles, may, from an economical point of view, be summarized in the following paragraphs. At Knap of Reeds, in Durham county, nearly at the Granville line, are several beds of siliceous red hematite, viz:

	Per cent.
Iron.....	33-15
Sulphur.....	.03
Phosphorus.....	.08

Near Haywood, in the angle of Haw and Deep rivers, is a series of beds of red ochreous ore or limonite. This ore makes its appearance again near Sanford, twelve miles southeast. The black-band or ball ores or kidney ores of the coal measures are imbedded in and co-extensive with the coal measures at Deep river, and at several places outside of this locality. The shaft in the Egypt coal mine shows three of these seams of ball ore, and two of black bands; these beds vary from sixteen inches to six feet in width. Most of these ores are apt to be of low grade in iron, and to carry much sulphur and phosphorus.

The Evans property (two veins) is six miles north of the Gulf mine. The ore is hematite, with contents in iron 32 to 60 per cent., and hardly more than traces of sulphur and phosphorus. The Ore Hill mine at Ore Hill, on the Cape Fear river, and on the Yadkin Valley Railroad, in Chatham county, is a most conspicuous property. Here are six or more veins, two or three of which may possibly reach to ten or fifteen feet in thickness. The ore ranges from limonite to hematite, with contents in iron 47.87 to 58.70 per cent., traces of phosphorus and sulphur 0.23 to 0.28 per cent. Connected with the above two properties, and in close proximity, are three other properties, all operated to supply a fine steel plant at Greensboro. It may be mentioned that several other localities in this section show large amounts of "float" ore. In Granville county at Seth Postoffice, eight and one-half miles east of Blue Wing, is another iron locality.

In the Huronian, in Person county, at Mount Tirzah, is a mine of specular iron which during the late war supplied a furnace near by. A recent sampling gives:

	Per cent.
Iron.....	41.98
Sulphur.....	trace
Phosphorus.....	0.14

Some six miles southwest, in Durham county, at Red Mountain, is an iron locality. A fine quality of magnetic iron is found on the east side of Haw river at Tyrrell's Mount, where the vein is reported to be three to four feet wide; also at Cheek's farm, three miles southeast of Chapel Hill. A fine micaceous hematite is found in Orange county near the mouth of Collins's creek. Five miles southeast of Hillsboro a fine vein of magnetite is traceable for one-quarter mile. Hematite is also found on the Hastings place and at the railroad bridge over the Eno river, one-half mile west of Hillsboro; also in four other localities from three to five miles west and southwest of the same town. Surface specimens both of magnetic and hematite from various parts of the country indicate large underground stores.

But the most notable ore bank in Orange county so far opened is at Chapel Hill. It is situated on a hill one-half mile north of Chapel Hill and more than 200 feet above the creek at its base. The vein carries hematite, and is seven to ten feet wide at the main shaft and with an enlargement to twenty-five or thirty feet near the second shaft. A second vein five or six feet wide crosses the former vein near shaft No. 1. The average analysis of the ore is:

	Per cent.
Iron.....	65.77
Phosphorus.....	0.025
Sulphur.....	0.11

There are surface indications on the hills both to the northeast and to the southwest for several miles which seem to connect this occurrence at Chapel Hill with the Evans vein in Chatham county, which has similar ore.

The ores of Montgomery and Randolph are found in the same great Huronian slate belt that constitutes the most notable feature of the middle region of the State, both geographically and mineralogically. At least twenty-five localities are known in these limits where considerable amounts of iron ore have been found, but so rugged is the country and so destitute of cheap means of transportation that hitherto there has

been little inducement to exploit or even to search for them. The best known of these ores occur at Franklinsville, Randolph county, and another vein has been opened in the same county at Asheboro. Both carry specular hematite, and some of the strongest and most highly prized iron obtained during the war came from this locality and was devoted to the manufacture of shafting, etc. Near Troy is an occurrence of hematite and one of magnetite.

One of the most persistent ranges or series of beds of iron ore in the State crosses the county of Guilford in a north-east and southwest direction, passing about ten miles northwest of Greensboro, near Friendship. It extends from the headwaters of Abbott's creek, in Davidson county, entirely across Guilford to Haw river, in Rockingham, and possibly beyond, a distance of thirty miles, making its appearance on nearly every plantation and hillside. The ore is magnetite and everywhere titaniferous. About three miles to the northwest occurs a similar and nearly parallel belt, and the relative positions of the two make it highly probable that they are the exposed edges of a synclinal basin of three miles in width, the Tuscarora range being the southeastern and the Highfield or Shaw's the northwestern. The average width of the veins is claimed to be fully four feet.

The range of contents is shown below in the average of ten samples:

	Per cent.
Iron.....	54.61
Titanium.....	8.07
Sulphur and phosphorus.....	slight trace

There are also other iron localities in Rockingham which do not belong to this range. For example, near Madison and two miles below Morehead's factory is a 10-inch seam of red hematite of high grade.

The central lower Laurentian belt from Guilford to Mecklenburg counties shows no deposits of any extent, though surface specimens are found in many places.

In the counties of Gaston, Lincoln and Catawba is one of the most extensive ore ranges in the State, as well as the best known, for it has been extensively worked for nearly 125 years, and has been the principal source of the domestic supply of iron during that period. The ores are sometimes magnetic, but more frequently hematitic, and are found in the talcoses and quartzitic schists, sometimes called the King's Mountain slates (Huronian). This body of schists gradually narrows towards the northeast, and the range extends only three to four miles northeast of the Catawba river; to the south it extends into South Carolina. This range naturally divides itself into two sections—the northern, in Lincoln and Catawba; the southern, in Gaston and in South Carolina.

Commencing with the most northerly of the well-known and productive beds in Catawba county, the succession is: Powell ore bed, Littlejohn, Abernathy, Mountain Creek, Deep Hollow, Tillman, Beard, Morrison, Robinson, Stonewall, Brevard and Big ore banks. The last four are in Lincoln county. Several furnaces and forges have been supplied with ore from these beds, particularly the Big ore bank, for a very long period, and the quality of the iron manufactured has always been good. Limestone for fluxing is found in an adjacent parallel series of beds. Only

charcoal iron has thus far been made. These beds occur with well-marked characteristics, as do also the horizons connected with them. The ores are mostly of a schistose structure, and may be described as magnetic or specular schists, and commonly require some dressing before use in the furnace. For a considerable part of their course there are two parallel beds, the combined thickness being from four to twelve feet, and in the Big ore bank occasionally eighteen feet. The following figures show the general range of the ores:

	Iron.	Phosphorus.	Sulphur.
Big ore bank.....	67.12	.006	.12
Stonewall bank.....	55.40	.011	.....
Powell bank.....	61.21	.009	.....

Owing to the system of working by leases only a moderate depth has been reached. Some subordinate beds, as, for instance, the Paine in Catawba and the Graham in Lincoln, are a little removed from this series, while several well-known mines in these counties are entirely remote, viz, the Barringer, in Catawba county, six or seven miles northeast of the Foryn bank, with others in the same vicinity, and in Lincoln a limonite locality two miles east of Lincolnton, another like body seven miles northwest and one five miles south of Cottage Home.

The south part of this range in Gaston is likewise crowded with equally valuable mines. Among them is the Costner, five miles southwest of Dallas, with a vein ten to twelve feet wide; the Ellison, one mile southwest; the Ferguson, one and a-half miles further on; the Fullenwider, one and a-half miles still further southwest. The Yellow ridge lies two miles southeast of King's Mountain village. The Mountain ore bank is one mile nearly northwest from the Ferguson, with a vein four to eight feet wide; the Ormond, one and a-half miles in the same direction. The latter has a magnificent vein eight to sixteen feet thick, and even more occasionally. This mine is a large producer of a very pulverulent ore of high grade and purity, admirably adapted for "fix" and largely used. The subjoined analyses show the general character of these ores:

	Iron.	Phosphorus.	Sulphur.
Costner.....	66.75	none	none
Ellison.....	52.61	none	none
Yellow ridge.....	61.74	trace	.033
Mountain.....	57.50	none	none
Ormond—powder ore.....	65.67	.013	trace
Ormond—block ore.....	67.97	.023	trace

The Atlanta & Charlotte Railroad passes in close proximity to all these Gaston-county beds. The Ormond is connected by a branch road, over which heavy shipments of ore are daily made to Birmingham and to Richmond at very satisfactory rates to the producers. No furnaces are at present in operation.

A Large Mining and Development Company Incorporated.

The Southern Mining & Developing Co. of Alabama has filed articles of incorporation at Athens, Ala. The capital stock is \$10,000,000, divided into 10,000,000 shares of \$1.00 each. The incorporators are as follows: A. C. Hart, Catasqua, Pa., 999,950 shares; James F. Dalrymple, W. H. Ament, Chas. C. Johnson and William Hendricks, of Seneca Falls, N. Y., ten shares each; George H. Opdyke, Jersey City, N. J., ten shares. The officers of the corporation are: J. F. Dalrymple, president; A. C. Hart, vice-president; W. H. Hendricks, treasurer, and W. L. Ament, secretary. The purpose of the company is to purchase, lease and rent lands, develop and improve real estate, open mining claims, prospect and mine for gold, minerals, metals and precious stones, constructing tramways and roads as may be

needed, and operating the same. Borrowing money, erecting machine shops and similar items are also included. The laws of Alabama require 20 per cent. of the capital stock of a corporation to be paid in before the charter is granted, and, such being the case, a large amount of money will necessarily be brought into the State.

A New Field for Electricity.

A contract, the details of which are full of interest, has been closed between the Thomson-Houston Electric Co. and the Baltimore & Ohio Railroad.

As is well known, the Baltimore & Ohio is now engaged in constructing a mammoth tunnel under the city of Baltimore, which will be, when completed, something over a mile in length. The question of properly ventilating this tunnel has occasioned considerable discussion, and it seemed that whilst patrons of the Baltimore & Ohio would be benefitted in the way of more rapid transit, they would, however, be subjected to the annoyance necessarily arising from the dense smoke that would collect inside the tunnel after being emitted from the locomotives pulling the many trains that would pass and repass through the tunnel each day.

The Thomson-Houston people concluded that they could remedy matters, and accordingly they have entered into a contract with the Baltimore & Ohio, the terms of which provide that in case they succeed in satisfactorily proving after a six months' trial that their scheme to pull the trains through the tunnel by means of a motor car operated on the trolley-wire system is practical and efficient, then the Baltimore & Ohio Railroad Co. will permanently adopt the idea. Of course if successful the question of smoke will be permanently and effectually disposed of. Railroad, electrical people and the general public will watch this trial of electricity in the railroad field with extraordinary interest.—Washington Building Register.

New Dredges for the Florida Coast Canal.

Two immense dredges are now being constructed by the Osgood Dredge Co., of Albany, N. Y., at New Smyrna, Fla., on the Hillsboro river, intended for work on the Florida Coast Line Canal. This company has now thirteen other dredges under construction for canal work in other sections, some of which are government contracts. These powerful dredges being built at New Smyrna are ninety feet long, thirty-five feet wide and nine feet deep. The timber used in their construction is all Florida wood, well adapted for the purpose. The eight cypress corner posts are each two feet square, and the machinery for each dredge will weigh over 100 tons. The boats are provided with two locomotive boilers, 130 horse-power, with condensers, and there will be such economy of water that an additional barrel per day will supply the waste. The fresh water tanks are 20x4½ feet, and there are two hydraulic pumps, one 12x12, the other 10x12, with double pumps on each drum. The hoisting engines are twelve bore, 18-inch stroke, swinging engines 8x10 and are geared 14x1, which gives great power. The booms are fifty feet long, and hoisting chains, 1¾-inch, 280 feet long. A pressure of seventy-five tons can be put on each dipper handle, which is sufficient to cut readily through gravel, coquina or sandstone. Each boat will be able to excavate 2000 cubic yards of earth per day of twelve hours. The total cost of the dredges will be between \$65,000 and \$75,000. They will be brought south by the inside route, and as they draw three feet of water they will deepen and widen the canals and shoals while in transit from New Smyrna to Jupiter and on to Biscayne bay. They will be ready for operations about the first of May.

The Harbor of Charleston, S. C.

By Col. I. W. Avery.

Standing upon the narrow, picturesque South Battery of Charleston, S. C., backed by a border of elegant homes and front yards, shaded by trees and threaded by white walks amid grass and flowers, comfortable with inviting seats and ornate with historic monument and statue, the observer looks out upon the city's beautiful harbor that is to be as potent in commerce as it is illustrious in famous event.

To the left the settlements of Mount Pleasant and Sullivan's island line the bay prettily, while between them the water stretches out straight to the ocean with the forever dramatic Fort Sumter nestling like a silent, walled sentinel in the centre of the entrance. This harbor could tell tremendous history.

But its importance is in its future commercial value, and this harbor has arrived to the dignity of a national institution, being and to be improved for the benefit of America's international commerce from the great West through a Southern trunk channel to foreign lands.

Up to July, 1892, the large sum of \$2,185,800 had been expended in improving this, the most important commercial harbor and the oldest of the South Atlantic coast of this continent. And the United States government has appropriated to complete Charleston harbor for its great national and international trade mission the further sum of \$2,178,000 to secure a twenty-one feet channel-way at low water, and the work is steadily progressing under the skillful direction of Captain Frederic V. Abbott, United States engineer corps.

There were originally four channels across the bar, the deepest having twelve feet at low water.

The plan now being carried out, started in 1878, comprises two jetties of stone, resting on a mattress of logs and brush, springing from Sullivan and Morris islands and converging on curves so as to cross the bar on parallel lines about 2900 feet or over half a mile apart.

The north jetty is over 14,000 feet, or 2.65 miles, long, with foundation from 43 to 118 feet wide, and the south jetty is over 16,000 feet, or 3.03 miles, long, with foundation from 40 to 206 feet wide. The outer two miles of each jetty is to be brought up to high-water level. Under the present contract the jetties are to be completed in three years from October 4, 1892, and 2,000,000 cubic yards of dredging are to be done between and beyond the jetties if so much be found advisable. The contract is so worded that the amount to be dredged can be increased or decreased.

Fully 50 per cent. of the shoal has disappeared. A narrow, straight channel of over fourteen feet depth at mean low tide has been produced, and with this as a central line of greatest depth a good, broad twelve feet, straight and convenient for commerce, is now in actual use. Considerable areas have appeared in the last year which show depths of over eighteen feet at low water where such depths were unknown before. This proves the deepening power of the jetty plan. The swift achievement of these results in the last year demonstrates the certainty and rapidity of the final result, so much desired.

Compare the Charleston bar at twenty-one feet low water and twenty-five feet high water with the high-water bars of Wilmington, eighteen feet; Georgetown, eleven and one-half; St. Helena sound, sixteen; Savannah, twenty; Fernandina, sixteen, and Jacksonville, fourteen, and she surpasses all save Port Royal, which lacks her commercial facilities.

As to distance, she is on the ocean, while from their bars Wilmington is twenty-eight miles; Georgetown, seventeen; Port Royal, eighteen; Savannah,

twenty-two; Fernandina, five; Jacksonville, twenty-five.

This new channel will save northbound ships eight miles distance into and out of Charleston and Western stuff 200 miles rail freight to the ocean to go abroad, while deep-draft ships ensure reduced freight rates on the quadruple cargoes that can be carried on the larger ships.

Besides the vast trade results that will come to Charleston, her 25-foot bar at high tide as the southern outlet for Western stuff to go abroad, her value for military use in case of war as a coaling and supply depot for large war vessels unable to go elsewhere would be uncontested, and hostile war ships in coming up the narrow channel of three miles would be exposed to sweeping fire from all points and able to reply from the bow only, thus ensuring easier harbor defence than any other port.

The future trade growth of Charleston, with her deepened harbor, can be measured only by her energy and enterprise in using her advantages, and if she lets any rival outstrip her in the race for trade superiority the responsibility will be hers alone.

Proposed Removal of the Gates Desk Co. to Augusta, Ga.

A meeting was held on the 14th inst. at Augusta, Ga., to discuss the question of the removal of the Gates Desk Co. from Greenville, S. C., to Augusta. The meeting was composed of the representative men of Augusta, and in the absence of President Patrick Walsh, of the Chamber of Commerce, Mayor Alexander was called to the chair. Mr. James U. Jackson stated the object of the meeting, which was to discuss with the Messrs. Gates the question of bringing their desk factory to Augusta. Mr. Jackson advocated the value of securing this industry for Augusta, and was sustained by all present at the meeting. The Messrs. Gates made a statement of the present situation of the company, whose business has outgrown their plant in Greenville, S. C., and they are compelled to enlarge and change location before making any improvements. They proposed to the people of Augusta to remove their plant to that city provided \$150,000 in bonds, which they would issue upon the industry, should be subscribed by the citizens of Augusta. The following committee was appointed to visit Greenville to examine into the affairs of the company and report to a subsequent meeting: J. W. Dickey, chairman; L. F. Padgett, W. H. Brigham, James U. Jackson and Landon P. Thomas. If the report of the committee is satisfactory the committee will be appointed to place the bonds.

A Proposed River Transportation Company.

The Macon & Brunswick Transportation Co. has been organized in Macon, Ga., by a number of the leading cotton men and merchants of that place and the towns lying along the Ocmulgee river between Macon and Brunswick. The intention of the company, which will file application for a charter during the coming week or so, is to own and operate a number of river boats to ply between Brunswick and Macon, thus bringing the latter in direct communication with the seaboard. Since the Ocmulgee was opened for navigation there has been a number of boats put on, but the amount of freight which might be handled is greater than their capacity, and, furthermore, their trips are made at such irregular intervals that little dependence can be placed upon them. The new company will establish a schedule and endeavor to hold to it as nearly as possible and will put on enough boats to handle the entire river trade. Such a course will tend to rapidly develop the entire section traversed by the river and will prove of inestimable benefit to both Macon and Brunswick.

Industrial Development at Meridian, Miss.

[From a Staff Correspondent.]

MERIDIAN, MISS., April 17.

I was very agreeably surprised upon reaching Meridian to find industrial matters in this eastern metropolis of Mississippi in a state of activity and every branch of manufacturing doing an excellent business, with the single exception of the Meridian Foundry, which recently assigned, and is consequently handicapped by being in the hands of the courts. However, the stockholders of this company are determined to pull out of their difficulties and place their plant again upon its feet, and are at this time negotiating with the creditors for an early adjustment of the trouble. These efforts are meeting with prompt encouragement from many of the creditors, and it is expected that the shops will shortly resume operations under the management of the stockholders. The causes of this embarrassment were not due so much to a lack of business as to an overstock of material, bad collections and mismanagement, so I am informed by the stockholders' attorneys. Aside from this assignment, the manufacturing industries of Meridian are all making money, and with the wheel works again rebuilt the industrial situation here can be said to be in excellent shape.

There is a strong concerted effort now being made by the people of Meridian to bring additional manufactures here, and an organization has been formed known as the Public Improvement Association, and composed of manufacturers, merchants, bankers and professional gentlemen, to accomplish this. From my own observation in the South this plan is about the only really feasible one for securing results and getting the attention of prospective locaters of factories, and the example of some of the larger cities in Georgia and Tennessee in organizing business leagues and bureaus of information is being followed in other localities, at least in agitation. Meridian has seized the idea with considerable enthusiasm, and has perfected the organization already, following the lines drawn by the more pretentious cities. The plan is to supply accurate information regarding the city's possibilities and to induce manufacturers to visit the place and judge for themselves as to its advantages as a location for factories. This plan, in the hands of citizens of high reputation who have no individual axes to grind and who only have the growth and prosperity of the community at heart, cannot fail to accomplish what is attempted, and I am glad to record that the idea of local organization is very generally taking root among the ambitious Southern towns.

Nearly every city in the South possesses some advantages—no single city combines all. It is, therefore, a grievous mistake for a correspondent to picture any particular place as the only one. It is more than a mistake—it is a positive injustice to the place itself. In confining a description of a city, therefore, to the views of citizens of reputation, taken with some degree of conservatism, the actual truth can be more readily obtained, and the use of the correspondent's superlatives be dispensed with. Accordingly, I let Meridian's citizens speak for themselves.

Mr. E. J. Martin, president of the largest machine works in the city, said: "The cause of our people wishing to add to the industrial plants already here is due largely to the fact that the city is taking great interest in general improvement and development. The question of sewerage is now before the voters and will soon be decided. The plans mean something like \$100,000 expenditure, and when the system is completed it will make Meridian a good location for a much larger city. There is no reason why we should not be a much

larger manufacturing city, for every industry here is making money. I look for a decidedly increased development as soon as the city has the sewerage matter settled."

R. F. Cochran, of the law firm of Cochran & Bozeman, said: "Our people are just waking up to the fact that Meridian occupies a choice position as a manufacturing city. We have been talking of organizing for concerted action for a long time, but until a few weeks ago no initiative was taken. I am glad to say, however, that at last some fifty of the merchants, manufacturers and bankers have come together to push Meridian and show the outside world what advantages we possess for industries. The plants already being operated here have accomplished a great deal for the city, and new ones will certainly accomplish more. The recent purchase of some twenty-five acres of land here by the Queen & Crescent people has put our citizens on the alert, as it may mean the location of large shops, and the fact that all the factories of the city have been earning large dividends has caused the determination to add to them."

Mr. George, general manager of nineteen oil mills, with headquarters in Meridian, said: "I am heartily in favor of the new organization to push the city, for there is every reason why it should be a great industrial point. There is an abundance of raw material in hardwoods, as is evidenced by the location of the wheel works, the cart works and the sash and blind factory. These concerns are all prospering, and why not others?"

Mr. Williams, one of the owners of the Meridian Sash and Blind Works, a very large company, said: "We are doing a splendid business in the sash, door and blind department, and also in the interior finish line. Our trade extends into the North and West. We recently sent ten men to Chicago to set up some work on the World's Fair buildings for which we secured the contract. Next year we intend to go into the North very extensively for trade."

These are the opinions of four citizens of reputation here. They speak for themselves. I have no comments to make. I will only say that Meridian impressed me favorably as an energetic city, and one of certain possibilities if pushed. The one thing really needed has been the sewerage system, and with this question now being agitated the bugaboo of the health of the city will have disappeared and the march resumed to fresh industrial successes.

F. J. COOKE.

A New Brick Warehouse in New Orleans.

Mr. Charles W. Ziegler, of New Orleans, one of the proprietors of the Fulton warehouse of that city, has contracted for building a new brick warehouse which will be on the line of the large freight depots erected by the Southern Pacific and Illinois Central and will be five stories high, occupying a space of about 155x145 feet. In accordance with the requirements of the Underwriters' Inspection Bureau there will be a large division fire-wall running through the centre of the building, with fire-proof doors for each compartment. There will be two endless chain elevators, one for each division, to facilitate the prompt and efficient handling of freight. The system of timbering is trussing with a central beam, virtually splitting the span into two spans of eleven feet each, with the girder between the two span sections, permitting the use of lighter timbers and making the spans safer in every way. The enterprise will represent an outlay of over \$55,000, and the work will be pushed without delay. Mr. Charles W. Charlton, Jr., is the architect, and Mr. George W. Van Horn has been awarded the building contract.

The Planters' National Bank Building in Richmond.

The Planters' National Bank building at Twelfth and Main streets, in Richmond, Va., is one of those excellent specimens of architectural work where disadvantageous conditions have been overcome and both beauty and convenience secured.

The site of the building covers a lot fronting forty-five feet on Main street and 102 feet on Twelfth, with a grade from the highest point on Twelfth to the lowest point on Main street of about seven feet. This problem called for a solution which would secure to the main bank building on the first floor an entrance without too many steps and access to the basement offices at the side which would not put them too far under ground. The architect, Mr. Chas. H. Read, Jr., of Richmond, has successfully met these conditions, giving a happy medium between them. This has been done by a large arched entrance on Main street, fifteen feet high by fourteen feet wide, leading into a vestibule from which wide steps lead up to the main bank floor. Side steps lead down to the offices in the basement below. In the basement the offices are all spacious in size and divided by partitions of polished oak and oxidized metal work. The floor is of cement, and sufficient light is secured from the windows on Main and Twelfth streets. In the rear of these offices is a very large steel room, which will be used by the Virginia Safe

for the employees of the institution. Above this, on the third floor, is a room for the storage of documents and a kitchen. On the fourth floor is a loft for the storage of documents which have to be kept convenient for reference. The space over the vault on the first floor is available and made accessible by a staircase in the rear, which also leads to the rooms above and will be used by the general book-keeper and such other clerks as are not required on the main floor, and who can be easily communicated with from the cashier's office by speaking tubes laid in the concrete flooring. Similar facilities are afforded for communication between the president's and cashier's rooms with the offices on the main floor. The building is to be lighted throughout with combination gas and electric-light fixtures.

Officers of the New Bank in New Orleans.

The Provident Savings, Trust and Safe Deposit Bank of New Orleans, previously mentioned, has received its charter and will commence operations in a few days. The capital stock of this corporation is \$300,000, divided into 3000 shares of \$100 each. The board of directors consists of the following merchants, business men and financiers: R. H. Walmsley, Henry Rice, George R. Preston, Nicholas Burke, Carl Kohn, Ed Toby, J. W. Castles, J. H. Stauffer, Jr., J. H. O'Conner, W. J.



THE PLANTERS' NATIONAL BANK BUILDING IN RICHMOND.

Deposit & Fidelity Co. It is fitted with improved locking machinery, and will be principally used for heavy packages, trunks and boxes put in the custody of the company. Still further in the rear is the boiler-room, with fuel bins and ash pits. Next to this is a storeroom for supplies, connecting by a dumb-waiter with a kitchen on the third floor. In the basement are the lavatories for the use of the employees in the building.

On the first floor, after ascending through the arched entrance, is situated on the left the offices of the Planters' National Bank and on the right those of the Safe Deposit Company. The space allotted to each institution is divided off with counters and railing, the predominant stone used being Tennessee marble, and railings of oxidized metal. The railings serve to form an aisle to the rear of the bank, at which is situated the vault.

A lobby to the left of the entrance is to be used for check desks for the accommodation of the patrons of the bank, and on the right of the entrance is the office of the vice-president of the Deposit Company. In the rear behind the vault is the president's office, accessible from a side entrance on Twelfth street, a reception room in the middle just behind the vault, and on the other side an apartment for the president's private clerks. On the first floor above these offices, reached by ascending an iron stairway, is the board of directors' room, a document room and a dining-room

Hardie, Henry Gardes, Santo Oleri, W. T. Nichols, E. F. Dyer, L. C. Fallon, Charles Janiver, Sam Hyman, A. H. Flaspoller, P. J. Maguire, W. R. Lyman and Hugh McLaskey. The names of the new board of directors afford every guarantee to depositors, and the very large number of subscribers to the stock attest its popularity. The board met on the 14th inst. and elected the following officers: R. M. Walmsley, first vice-president; Carl Kohn, second vice-president, and William P. Nicholls, third vice-president. The office of president was not filled, the election being postponed for the present. It is said, however, that Mr. J. C. Morris, president of the Canal Bank and the originator of the enterprise, is to be the president. After the election of vice-presidents the board elected Mr. George W. Young cashier. The new bank will pay 3 per cent. to depositors. A committee has been appointed to choose a location for the bank, and it is understood that the institution will open for business at once.

W. H. EVANS & SON, of Knoxville, Tenn., have shipped to Chicago five carloads of marble slabs, etc., for the lavatories at the World's Fair, and also seven carloads of beautiful pink Tennessee marble for the interior decoration of the art building erected by Chicago for the fair. Included in this lot are eighteen turned columns eighteen inches thick and twelve feet long.

GENERAL NOTES.

Brief Mention of Various Matters of Current Interest.

THE Louisville & Cincinnati Packet Co. has let a contract for a handsome steamer to ply between Louisville and Cincinnati. The new boat will be 300 feet in length and have five boilers. The contract requires that it shall make the trip between the two cities in ten hours. She will have staterooms to accommodate 200 passengers.

THE citizens of Natchez, Miss., are enthusiastic over the interest taken in the meeting held on the 11th inst. for the purpose of organizing an association to encourage manufacturing enterprises. The organization started out under the most favorable auspices, and stock will be subscribed on the monthly instalment plan. The officers elected are of representative business men, and are as follows: President, L. G. Aldrich; vice-presidents, Henry Frank, J. W. Lambert, A. H. Foster and George Brandon; secretary, James Farrell; treasurer, A. G. Campbell. Another meeting will be held in a few days to adopt a constitution and by-laws.

OUACHITA COUNTY'S exhibit for the Arkansas State building at the World's Fair, Chicago, was shipped from Camden, Ark., on the 11th inst. It consists of a quantity of samples of the resources of that section. Among the works of art was a plaster bust of the late Gen. Albert Pike, which will occupy a position on a pedestal six feet high, and composed of seventy-six varieties of native hardwood all highly finished and carved. A fine silk-culture exhibit was also included, and many fine paintings. There was also a fine collection of minerals and articles from the workshop and homes, besides a profusion of agricultural and horticultural products.

ANOTHER cigar factory is about to be established at Tampa, Fla. The Arnica Cigar Co., with a capital stock of \$25,000, has made application for a charter. The following gentlemen are named as incorporators: President, Herman Smeal; vice-president, N. B. K. Pettengill; secretary, George R. McFarlane; directors, Herman Smeal, Hugh C. McFarlane, George R. McFarlane, Augustus Lindcamp and N. B. K. Pettengill. The company will buy and sell leaf tobacco and enter extensively into the manufacture of cigars. It will also go into buying and selling real estate for the purpose of building and renting houses for operators or others who may desire to purchase.

AT a meeting of the Dallas Manufacturing Association, of Dallas, Texas, held on the 4th inst., a resolution was unanimously adopted directing the president of the association to cordially invite and urgently request the manufacturers and inventors of Texas to meet at Dallas on the 25th inst. for the purpose of organizing a State manufacturers association. The object of the association is to secure more advantageous freight rates to and from the factories; to get favorable legislation; to prevail upon the people to use articles of home manufacture, and to promote the manufacturing interests of the State.

A SPECIAL session of the city council was held in Tampa, Fla., last week to confer with Col. George E. Waring, the drainage expert and civil engineer. Colonel Waring proposed a plan for the sewerage of the city which will include two large mains on the east side of the river which will be about fifteen inches in diameter. There will be numerous sub-mains of about eight inches in diameter and a number of laterals of six inches in diameter. In his rough estimate of \$158,000 about thirty miles of pipe is included, and additional sewerage

would cost \$5000 per mile. President McNeill appointed a committee of three councilmen to wait on the governors of the Board of Trade and arrange for a mass-meeting of the citizens at an early date, when the sewerage question will be laid before them.

THE Mobile (Ala.) Land Improvement Co. held its first sale of lots on April 15, at which more than 100 lots, averaging about \$300 each, were sold. About 300 lots remain, and it is expected that these will be disposed of at the sales to be held this week.

A CONTRACT has been closed for the removal of the Hercules Pipe Works at Pell City, Ala., to Anniston, and arrangements for same will be made immediately. The plant is at present employing 100 men and utilizing a paid-up capital of \$100,000. When removed to Anniston the capacity of the plant and the force of workers will be doubled. Sanitary piping is produced, and a constant demand is had for the entire output.

THE Hercules Pipe Works will be moved from Pell City to Anniston, Ala., where it will be enlarged and have additional capital placed in it.

IT is said that a prospector has discovered a rich lead of silver ore some twenty miles from San Antonio, Texas, and will endeavor to secure capital to open and operate the mine. A crude assay of the ore showed a yield of about forty ounces of silver to the ton.

THE Macon & Brunswick Transportation Co. will in a few days apply for a charter to run small steamers on the Ocmulgee river to carry both freight and passengers. Larger steamers will be built as soon as navigation is sufficiently improved.

THE Southern Building and Loan Association of Knoxville, Tenn., and the New South Building and Loan Association of New Orleans have both opened branch offices in Rome, Ga., this week and appointed local boards. The former has Mr. E. T. McGhee for its president and the latter Mr. John T. Black.

A TRACT of 500 acres of land in Meade county, Ky., has been purchased by Messrs. J. B. Withers, of Twin Caves, Ky., and I. J. Monarch, of Owensboro. They have commenced to plant the entire tract with peach trees, and when finished will have about 50,000 trees in the soil.

THE George's Creek Coal & Iron Co., of Lonaconing, Md., has shipped a block of coal weighing ten tons for exhibition at the World's Fair.

THE annual meeting of the stockholders of the Southern Iron Co., of Huntsville, Ala., will be held on May 2.

THE city of Nashville, Tenn., is about to let contract for the construction of a sewer which it is estimated will cost about \$350,000.

THE Georgia Bauxite Co. is actively engaged in mining at present in Bartow county, near Rome, Ga. Its operations include the properties of the Comasena and Barnsley homesteads, and the work is carried on through lease contracts with the owners of the land. The company has a capital stock of \$100,000, and ships the bauxite to Philadelphia. A number of Philadelphia and Pittsburg capitalists were in Bartow county recently and inspected the property. This industry promises to be one of increasing volume.

THE first special law on the records for the session of the twenty-third legislature of Texas is House bill No. 171. It grants to the Waco Water Power & Electric Co. the right to construct and maintain and raise a dam across the Brazos river, to con-

demn and pay for the lands, rights and other property overflowed or injured by the work. The dam is to be constructed at any practical point within five miles above the suspension bridge at Waco, and must be completed within five years after the approval of the act. This bill became a law by virtue of the lapse of time prescribed by law in which bills shall be approved or vetoed.

THE Roanoke (Va.) Machine Works has received orders for eighteen locomotives, thirty cabin cars and two wrecking cars, the whole aggregating about \$208,500 in value. This, in addition to the large amount of new and repair work now on hand, will keep the works operating on full force for at least six months. Six of the engines will be of the three-wheel connecting type used for shifters, and the remaining twelve of the consolidated type.

THE Coosa (Ala.) Advocate says the economy of good roads is illustrated in the old plank road running from Talladega town to Wetumpka through this county. The road when first built was graded almost as smoothly as a railroad bed, and then one side was planked its entire length. Of course the planking and the old stages have disappeared, but the road exists yet, and with very little or no attention paid to it, is easily the best road in this section of the State.

M. V. WRIGHT, a florist in Houston, Texas, has hit upon a novel plan for advertising Houston and at the same time carrying on a lucrative business for himself. As soon as the World's Fair opens a shipment of 50,000 cape jessamine buds will be made each day from the Houston gardens of Mr. Wright to Chicago, where they will be placed on sale at stands and on the streets. Each of them will bear a tag, giving the name of the florist and stating that it was raised at Houston, Texas, and they will be sold at five cents each.

THE Bellevue Canning Factory at Macon, Ga., is now nearly completed, and within the next thirty days will be in full operation. The tomato crop will soon be coming in, and the company has contracts for the product of over seventy-five acres. About 20,000 cases of tomatoes will be canned this season. When the peach crop begins to come in the factory will give its attention to this, and following that will can sweet potatoes. This latter is becoming a staple line, and a big trade in it is anticipated during the coming fall and winter.

THE citizens of Crowley, La., are about to form a building and loan association, and a meeting was held last week for the purpose of forming a temporary organization. P. J. Chappins and Louis Mayer were elected chairman and secretary pro tem., respectively, and the following gentlemen were appointed a committee on charter: F. T. Foote, D. P. Jamany, J. Frankel, J. G. Medlenka and W. E. Ellis. The next meeting will be held this week, when the committee will report and a permanent organization be formed.

A NUMBER of prominent ship brokers and agents in New Orleans recently met together and drafted a communication to the Secretary of War asking for exact information as to the arrangement existing between the government and the Eads Jetty & Improvement Co., which has the contract for the maintenance of a channel in South Pass and the jetties. It is complained that where there should be thirty feet of water in the channels vessels drawing twenty-five and a-half feet have difficulty in passing.

THE Columbia (S. C.) Land & Investment Co. has expended a large sum of money in laying out a small town on the suburbs of Columbia. The tract consists of 336 acres

and is cut into blocks of four acres each, all streets being 100 feet wide, with a 75-foot driveway and 12½-foot sidewalks. A large number of trees have been planted and several parks laid out.

THE large rice mill at Opelousas, La., is now nearly completed, and preparations are on foot to erect another and much larger one. Work upon it will be commenced shortly, so as to complete it before the new crop begins to come in the fall.

J. A. WILDER, president of the Alabama Steel Works at Fort Payne, Ala., states that he has secured \$50,000 for a working capital with which to start up the steel works. It is expected that by May 20 operations will be begun.

THE city council of San Antonio, Texas, has appropriated \$13,000 with which to purchase two garbage crematories.

Mexican Notes.

THE gross earnings of the Mexican Inter-oceanic Railroad during the week ending April 1 amounted to \$45,751.76.

A SYNDICATE is organizing in the City of Mexico for the purpose of controlling shipments of bananas from Mexico to the United States.

READ & CAMPBELL, the contractors who have built the Mexican Southern Railroad, are now delivering it into the hands of the proprietary company.

THE approximate earnings of the whole system of the Central Railroad for the fourth week of March were \$242,457.05, and for the entire month \$698,437.11.

ONLY twenty-one miles are lacking to close the gap in the Tehauntepec Railroad, and this will be completed so soon as the weather will permit. The government has the necessary funds at its disposal, and will push the completion of the enterprise with all possible dispatch.

SOME months ago George Fritch, a prominent merchant of Denver, Col., was granted a concession for a belt railroad around the City of Mexico, and within the past few days he and his associates have made the preliminary arrangements for beginning work at constructing the line. The corporation formed for the purpose is called the Metropolitan Belt Railway Co., having Mr. Fritch for its president. The road will completely encircle the city and pass through all the principal suburbs.

THE work of improving the national palace and various public buildings in the City of Mexico is going forward steadily, and in the same line a number of new government buildings, military barracks, custom-houses, bonded warehouses, light-houses, dry-docks and arsenals are being constructed in different parts of the country. The drainage work to free the city from overflow is also progressing steadily, and, notwithstanding these and other heavy expenses, the government has met every obligation.

THE secretary of communication in Mexico has sent a letter to the various railroad companies requesting a reduction in rates on corn and beans owing to the scarcity of these necessities in Mexico. In response the railways have agreed upon the following rate per ton on the food products named to the City of Mexico: Central and National Railways, from the Texas border, \$17.00 to the general public, \$14.00 to the Board of Charity; Mexican & Inter-oceanic Railway, \$15.00 from ship's side, \$14.00 from the railroad station at Vera Cruz for the public, \$12.00 from the ship's side and \$11.00 from the station at Vera Cruz for boards of charity.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 227.]

Railroad Development in West Virginia

A charter was obtained on April 15 in West Virginia by the Roaring Creek & Charleston Railroad Co. The company proposes to build a line of standard-gauge railroad from the mouth of Roaring creek, Randolph county, by the most practical route to Charleston, the State capital. The company has a capital stock of \$300,000, with the privilege of increasing indefinitely. The incorporators are land-owners in the Roaring Creek coal region, who have in view the opening and developing of their holdings. The section is splendidly timbered, and development along that line will also be encouraged. The line will be a feeder for the West Virginia Central & Pittsburgh. It is not likely that Charleston will be reached by the road for a long time, but the line will head in that direction, and may connect with a line running in a northerly direction. The incorporators and shareholders are: S. B. Diller, J. D. Skeets and W. S. Diller, of Lancaster, Pa.; O. C. Womelsdorf, of Pottsville, Pa.; D. P. Baker, of Beverly, W. Va. All these gentlemen are financially interested in the development of the territory through which it is intended to build.

The work of the engineers of the Chesapeake & Ohio Railroad on the new extension of this line from Barboursville, W. Va., up the Guyandotte river is progressing quite rapidly now. They have covered nearly half the fifty miles which it is intended to cover and have found the topographical features of the country well suited to the construction of a road without great expense. The road is to be about fifty miles in length and is to follow the Guyandotte river from Barboursville to Logan Court-house, keeping, if possible, on the north or west side of the river all the way. This piece of road will develop some of the finest coal and timber land in the State of West Virginia. Heretofore the timber industry in this section of the State has been dependent entirely upon the river for transportation, while the coal has been practically inaccessible. The route which the engineers are following has been gone over before and the advantages of the road were well known before this work was begun. With the branches which the Chesapeake & Ohio is building into the New River coal fields and its arrangements for a connection with the Kanawha & Michigan for a western outlet, it will play an important part in the greater development of the resources of the country traversed by its road.

An item of considerable interest in the Flat-Top (W. Va.) coal region is to the effect that the Norfolk & Western Railroad during the month of March last handled and transferred for shipment in the Blue-field yards alone 13,500 cars of coal and coke. The interest is further enhanced when it is known that this is an increase of 1500 cars over the month previous. Although the Norfolk & Western region is one of the older sections of West Virginia to be opened for development (a part of it being opened as far back as 1884), it shows no decrease in the number of new mines opened or of new ovens added. The number of new works put into operation the past year is as great as at any time since the road was first built.

The work on the bridges which are to connect the Chesapeake & Ohio and Kanawha & Michigan Railroads in the Kanawha valley are nearing completion. The tracklaying is almost done and the connection can be made soon. The bridge at the mouth of Gauley river is nearly finished, but the one at Narrows falls is heavier construction and will take longer. Both, however, are being pushed forward as

rapidly as possible. By the completion of this work the shipping facilities of the Kanawha valley coal region will be materially improved, and the connection between the two roads will prove of considerable benefit to each. They traverse a good part of the Kanawha valley, but are on opposite sides of the river, and mines heretofore could reach only one or the other. Under this arrangement every mine in the valley will be given three or four instead of one or two points for market. The Kanawha & Michigan will be enabled to run trains from Columbus, Ohio, and the West to the East via the Chesapeake & Ohio, while the latter can have the same advantages to the West.

The stockholders' meeting of the West Virginia Central last week while in session received a delegation from the Point Pleasant, Buckhannon & Tygart's Valley Railroad Co., which is now making surveys for a line from Buckhannon, Upshur county, to a point on the Belington branch of the West Virginia Central. The surveys have not been perfected yet, but enough has been done to insure that a short line can be built. The West Virginia Central management gave the promoters of the new road every encouragement to go on with their work and offered them very good inducements.

The Norfolk & Western has begun the grading on a spur track up North Fork creek to reach the mines of several coal companies now ready to begin operations as soon as transportation can be had. Among the concerns which will be reached by the new branch are the Rolfe Coal & Coke Co., the Arlington Coal & Coke Co., the McDowell Coal & Coke Co. and the Gilliam Coal & Coke Co. It is stated that the Norfolk & Western Company has given out that it will build branch lines off from the main line at any point where capital is invested in lands bearing coal or timber which it is desired to develop. This will prove a great inducement to capital to locate not only along the line of the road, but at points contiguous.

Norfolk & Western's Report.

The twelfth annual report of the Norfolk & Western Railroad Co. is out. It covers the operations of the company for the calendar year 1892. At the close of the year the company had in operation 1555 miles of main line. No new extensions or improvements were undertaken during the year, but several important works necessary, in anticipation of the completion of the Ohio extension, and undertaken the previous year, were completed. These include 3.87 miles of second track between Norfolk and Lambert Point, and at the latter point a merchandise pier with two-story warehouse 705x140 feet, equipped with all modern appliances for the economical handling of freight, an 18-stall engine-house and repair shops. A branch line at Lynchburg, connecting the road with the Lynchburg & Durham, was also completed. The Ohio extension, which was commenced in March, 1890, was so far completed November 1, 1892, as to permit of opening the line for traffic upon that date, although the ballasting, station buildings, etc., were not completed. This was done in order to furnish facilities for hauling the machinery to the mines being opened and the saw mills and other industries being established along the route.

The results of operations were as follows:

Gross earnings.....	\$9,952,881
Operating expenses and taxes.....	7,631,672
Net earnings.....	\$2,321,209
Other income.....	144,666
Total income.....	\$3,065,815
Add remainder special dividend fund of \$271,260.....	136,260
Total.....	\$3,202,075
Deduct fixed charges.....	2,475,761
Net income.....	\$726,314
Previous surplus.....	1,456,976
Total.....	\$2,183,290

Out of this was paid \$1,030,000 in dividends and \$139,458 in purchase of bonds for the sinking fund, leaving a surplus of \$1,013,831.

The gross earnings were \$764,839.68 more than during the previous year. Of this amount \$374,772 was due to the increased mileage, which was 217 miles more than the average of the previous year, the average rate per ton per mile being even lower than for the preceding year. The gross earnings of the main line and its branches were \$10,383 per mile, as compared with \$10,146 per mile of the previous year, the earnings of the older portion of the lines thus showing a slight increase, but the smaller earnings on the newer and less developed portions reduced the average earnings of the entire system to \$7609 per mile.

The operating expenses were \$1,021,915 in excess of the previous year, the proportion of operating expenses to gross earnings being 71 per cent., as against 65 per cent. in the previous year, but the cost of operation per mile shows a reduction of \$132, the operating expenses for the year being at the rate of \$5376 per mile, as compared with \$5508 for the previous year. The net earnings decreased \$257,065. Of this falling off the report says:

"The unfavorable and disappointing results of the past year (which were not peculiar to your company, but prevailed in many sections of the country and affected many railroad lines), whilst principally due to the fact that the industries upon the newer portions of your line had not, on account of the general business depression, been sufficiently developed to enable them to contribute their full quota to the revenue of your company, were also in a measure due to the falling off in through traffic, the decrease in earnings from this source, notwithstanding the number of new connections made, being \$88,345, but also to the fact that the increase in tonnage, which amounted to 826,786 tons, was in classes paying the lowest rates of freight."

The passenger traffic was also less remunerative than heretofore, owing to largely increased train mileage with less proportionate increase in the number of passengers carried and to the lower average rate received per passenger per mile, the result being that although the number of passengers carried during the year increased 345,387, the gross earnings therefrom only increased \$61,226.50, and the expenses increased \$221,095.84, resulting in a net decrease from this source of \$159,869.34.

The mineral traffic increased during the year 650,777 tons over the previous year. The coal and coke transported over the company's line, including 530,883 tons used by the company, was 3,666,733 tons, an increase of 384,062 tons as compared with the previous year. The shipments of iron ore were 618,757 tons, an increase of 15 per cent. over 1891. The pig-iron shipments were 417,611 tons, an increase of 47 per cent. over 1891. The completion of the road to the Ohio river practically completes the system, and no further large expenditures are required, and the outlays of the future will be confined to equipment, additional side-tracks, double-tracking and terminal facilities as the annually increasing business will necessitate.

A Brighter Outlook for the Terminal.

At last there is something tangible in Richmond Terminal affairs, and the rehabilitation of the system seems assured. The announcement of Drexel, Morgan & Co. that they would undertake the task, so often abandoned and almost despaired of, of reorganizing this great system, is pleasing news to the extensive interests involved. Coming from a concern with the prestige and resources enjoyed by this firm, it means success. They believe the reorganization practicable and that a plan can be executed for placing the property on a sound finan-

cial basis that will be equitable and prove to the ultimate advantage of all security-holders. The board of directors of the Terminal have recommended the holders of all classes of securities to deposit them immediately with Drexel, Morgan & Co.

Chicago-St. Louis Electrical Railroad.

It appears that the building of the Chicago & St. Louis Electric Railroad has been retarded owing to the objections arising from the imperfect character of the proposed types of multiphase motors and the untried transformer system. It is now stated, however, that the General Electric Co. has perfected such a motor, and has announced that it is fully prepared to contract for the entire electrical equipment of the line under a guarantee that a speed of 100 miles an hour will be attained with perfect safety. Negotiations are said to be now pending with the General Electric Co., which will probably result in its undertaking the work of equipping the road. If these statements are authentic it can be reasonably said that this remarkable project stands excellent chances of being carried out, and a revolution in railway travel will very likely be the notable contribution of 1893 to the world's progress.

Railroad Notes.

THE railroad shops of the Western & Atlantic at Atlanta, Ga., have been completed. The plant is considered equal to any of the kind in the country, and represents an investment of \$150,000.

A CONVENTION of traffic managers of South Carolina railroads will be held at Columbia, S. C., on May 2. The meeting is to endeavor to show the railroad commission that the roads cannot make any returns to their stockholders under existing traffic rates, and to induce it to permit an advance.

A PUBLICATION that promises to excel anything ever before attempted by any railroad is to be issued by the Baltimore & Ohio Railroad Co., and will be prepared by J. G. Pangborn, in charge of the company's exhibit at Chicago. It will treat of the evolution and development of the world's railway. A feature of the work will be more than 150 color-plates in three printings, illustrative of the evolution of motive power from Sir Isaac Newton's initial idea of steam propulsion on land in 1680 to the 100-ton compound locomotive of today. The volume will be handsomely bound and the edition limited.

THE Owensboro, Falls of Rough & Green River Railroad has completed its extension to Horse Branch, Ky., where it connects with the Newport News & Mississippi Valley. The former road is owned by the latter.

THE belt line at Anniston, Ala., connecting the Woodstock Iron Co.'s furnaces and the Radford Pipe Works with the East Tennessee, Virginia & Georgia Railroad, has been completed.

THERE will be a general meeting of the stockholders of the Lynchburg & Durham Railroad Co. on April 28 at Lynchburg, Va.

W. R. CRUMPTON, general manager of the Baltimore Forwarding & Railroad Co., which is operating and improving the Baltimore & Lehigh, has been elected second vice-president of the company.

THE Texas Car Service Association has been organized at Houston, Texas, with A. H. Swanson, general manager. The leading roads of the State are interested.

THE Baltimore & Ohio will, it is understood, build thirty-two miles of second track on its Pittsburg division at a cost of \$200,000.

MAURICE A. POWERS has been appointed superintendent of terminals of the Georgia Central at Savannah. Mr. Powers is private secretary to General Manager Odell, of the Baltimore & Ohio.

PHOSPHATES.

First Quarter's Shipments of Florida Phosphate.

The following tables represent the shipments of Florida phosphate, in long tons, for the quarter ending March 31, 1893, as furnished by our correspondent at Bartow, Fla., Mr. C. G. Memminger:

FERNANDINA.

1893.	Domestic	Foreign.	Total.
January.....		6,493	6,493
February.....		10,814	10,814
March.....		13,190	13,190
Total for 3 months.....		30,497	30,497
Total for corresponding period in 1892.....		25,837	25,837

PUNTA GORDA.

1893.	Domestic	Foreign.	Total.
January.....		1,800	1,800
February.....	1,716	3,505	5,221
March.....	141	2,050	2,191
Total for 3 months.....	1,857	7,355	9,212
Total for corresponding period in 1892.....		9,315	9,315

PORT TAMPA.

1893.	Domestic	Foreign.	Total.
January.....	3,544	3,572	7,116
February.....	1,031	708	1,739
March.....	2,310	4,300	6,610
Total for 3 months.....	6,885	8,580	15,465
Total for corresponding period in 1892.....		10,913	10,913

BRUNSWICK, GA.

1893.	Domestic	Foreign.	Total.
Jan., Feb. and Mch.....		8,012	8,012

HARD ROCK PHOSPHATE.

	Domestic	Foreign.	Total.
Fernandina.....		30,497	30,497
Port Tampa.....	252	7,872	8,124
Punta Gorda.....			
Brunswick, Ga.....		8,012	8,012
Railroads.....			
Cons'd in Florida.....	500		500
Total.....	752	46,381	47,133

PEBBLE PHOSPHATE.

	Domestic	Foreign.	Total.
Fernandina.....	6,633	708	7,341
Port Tampa.....	1,857	7,355	9,212
Punta Gorda.....			
Brunswick, Ga.....			
Railroads.....	5,500		5,500
Cons'd in Florida.....	500		500
Total.....	14,490	8,063	22,553

Total hard rock..... 47,133 tons.
Total pebble..... 22,553 tons.

Grand total..... 69,686 tons.

Phosphate Developments in Columbia County.

FORT WHITE, FLA., April 13.

A very rapid development of phosphate territory is in progress throughout Columbia county, and in this immediate vicinity the various mines are preparing for an increased output. The betterments that have been completed by the various companies and those now in progress will facilitate operations to a very large extent, and it is said that the shipments of phosphate from the mines at this point will be over 75,000 tons per month when the companies get in good working order. About 40,000 tons of phosphate were shipped from Fort White during the month of March. The T. W. Pitts Company is just getting in good working order, and the Perryn Phosphate Co. has just finished its works and will soon start to mining. Gen. F. B. Bailey is putting in a new plant on the Tolen place, and will have all the latest appliances to assist in the work of mining. Another improvement which is projected here is that of the Fort White Phosphate Co. This company talks of running pipes from its mines to furnish a supply of sulphur water, and if this arrangement is made it will result in an increase of business here.

This sulphur water is said by chemists who have analyzed it to possess virtues greater than the waters of the Suwannee Springs. A fine hotel having beautiful grounds has been erected, and further additions will be made in case this enterprise is carried out.

Pebble Phosphate Matters.

ORLANDO, FLA., April 14.

There is a decidedly better feeling in the pebble district as to the future of mining that kind of phosphate. Many of the companies, while not forced to suspend operations, having been dissatisfied with the profits compared with the expectations and promises of the early days of the industry, are now coming back to good, honest work, and idle plants are beginning to teem with busy life.

In a conversation with Col. Joseph H. Durkee, of Jacksonville, president of the Alafia River Phosphate Co., one of the best posted men in the State, and who has just been appointed receiver of the Jacksonville, Tampa & Key West Railroad Co. by the United States Court, he expressed much encouragement in the outlook. The Alafia Company has been a heavy shipper of fine grade river pebble. Its plant, which is a good one, is located most favorably for doing business directly on the Alafia river, the second phosphate stream of the State, with four feet of available water at its pumping ground, eight miles from the Hillsboro bay. Its product is floated down to the bay in its own lighters and loaded to its own charters at anchorage in a safe harbor, where twenty feet of water renders it practicable for any craft engaged in carrying phosphate.

The Punta Gorda people are fully aroused on the subject of improving their harbor facilities. The harbor is not a deep one, but it has some good possibilities with a little work. The government has recently made it a port of entry, and the tonnage of pebble from the valley of the Peace river is very considerable through the year. When phosphate shipments began about three years ago an appropriation was made for this harbor. A contract was awarded, but the firm securing it, having other business ahead, have neglected this harbor. Chafing under the delay, having tried every means they could devise—appeals to the contractors, urgent solicitations for relief to Congressmen—they have resorted to an indignation meeting, and believe this form of expression of public disapproval will bring about good results. Something must be wrong somewhere. Generally the hard work is in getting the appropriation, not in spending it.

It is quite certain that a bill will be introduced in the legislature of Florida at its present session to reinstate the railroad commission which was abandoned some three years since. If the commission is re-established, however, a readjustment of rates is expected by shippers of oranges, phosphate and other productions of the State.

Reports from Ocala are to the effect that Mr. Abertus Vogt, whose name is familiar to all in connection with the early days of hard rock phosphate development, has discovered rich beds of nitrate of potash near Ocala. The reports so far are very meagre and confirmation is awaited.

The Marion Phosphate Co., near Dunnellon, has placed in position its log washers. This company has expended large sums of money for expensive machinery which has not proven satisfactory. In reorganizing its plant it has adopted only the most suitable, and its works are now very satisfactorily arranged and equipped.

A New Phosphate Company Organized.

The Luraville Phosphate Co., of Luraville, Suwannee county, Fla., has just been organized and charter applied for. The names of the incorporators are P. A. McIntosh, of Thomasville, Ga.; T. J. McIn-

tosh, of Luraville, Fla.; J. Wyman Jones and C. B. Parsons, of Bonne Terre, Mo.; George S. Dana, of Utica, N. Y., and Charles M. Chapin, of Englewood, N. J. The purpose of the company is the mining and manufacturing of phosphates, the buying and selling of phosphate and timber lands and the construction and operation of railroads or tramroads through its extensive properties. The capital stock is \$100,000, divided into 1000 shares of the par value of \$100 each. The company owns a rich tract of 320 acres, situated in Suwannee county, which it will operate at present. The officers consist of the following gentlemen: P. A. McIntosh, president and treasurer, resident at Thomasville, Ga.; T. J. McIntosh, superintendent and general manager, with main office at Luraville, Fla., and J. Wyman Jones, George S. Chapin, George S. Dana, C. B. Parsons, P. A. McIntosh and Thomas L. McIntosh as directors.

Organization of Pebble Phosphate Miners.

A most important meeting of the pebble phosphate miners of Florida was held at Lakeland, Fla., on the 5th inst. for the purpose of organizing an association. Mr. John Beatey was called to the chair, and C. G. Memminger elected secretary. The meeting was composed of representative men engaged in the industry, and was perfectly harmonious in every respect. There was some discussion at the opening as to the by-laws and constitution of the association, and an agreement was drawn up and signed by all present, which is as follows: "We, the undersigned, miners of pebble phosphate in Florida, do hereby unite ourselves into an association for our mutual benefit and advantage." After the adoption of a constitution and by-laws the following officers were elected for the ensuing year: R. A. Ellis, president; John Beatey, vice-president; J. Northcott, secretary and treasurer; executive committee, President Ellis, ex-officio chairman, and Messrs. Hayward, Beatey, Lay and Wall. The name of the organization as formed is the "Florida Pebble Phosphate Miners' Association," and will have for its object the mutual information, benefit and protection of the interests represented. The membership shall consist of two classes, representative and associate. Every pebble-mining company equipped for operation shall be entitled to one representative, who shall be allowed one vote. Associate members shall be entitled to the privileges of the floor, but not to vote. There were present at the meeting representatives from the following pebble phosphate companies: Bone Valley, Tampa, Terracia, Land Pebble, Pharr, Lake Hancock, United States, National Peace River, Fort Meade, Virginia-Florida, Florida Consolidated, the Moore & Tatum, Florida Mining & Transportation Co., Marietta, and Massachusetts & Florida Phosphate Co., Limited. The association will meet in Bartow on May 3.

An Interesting Experiment with Fertilizers.

It seems to be an open question as to what fertilizer, whether mixed or used alone, will produce the best results on cotton. Every experiment toward determining this is of both interest and value, and comparative trials, where various fertilizers are used under the same conditions, are of particular service. Recently the Laurens (S. C.) Advertiser published an account of experiments made by Aaron Cannon, of that place, in which a plat 25x176 feet was laid off, subdivided into sixteen plats 16x171 feet, each containing four rows four feet apart. The fertilizer for each plat was divided into four equal parts and carefully applied to each row. The land was well prepared and planted with fruit cottonseed on April 28, 1892. Cultivation was carried on in the usual

way, though somewhat interfered with by the heavy rains, and when of proper height the stalks were thinned out to one in every two feet. Only the middle rows of each plat were used, hence each test area contained the thirty-second part of an acre. The stalks in each test area were counted, and then the number reduced until each area contained the same number of stalks. The picking was not begun until noon, and was finished before evening, so that all of the cotton was dry when weighed.

The yields from this experiment, calculated in acres, were as follows:

Fertilizer Used.	Amount per acre. Lbs.	Seed cotton per acre. Lbs.
Nitrate of soda.....	128	304
Acid phosphate.....	200	704
Kainit.....	160	376
Nitrate soda and acid phos.....	328	640
No manure.....		240
Nitrate soda and kainit.....	288	432
Acid phosphate and kainit.....	360	516
Nitrate soda, acid phosphate and kainit.....	488	832
No manure.....		202
Floats.....	200	320
Nitrate soda and floats.....	328	384
Cottonseed meal and floats.....	400	512
Cottonseed meal and acid phosphate.....	460	672
Stable manure.....	4160	656
Cottonseed meal, acid phosphate and kainit.....	560	736

As will be seen by a comparison of these figures, the average yield where no fertilizer was used is 202 pounds. An application of 200 pounds acid phosphate per acre gave an increased yield of 501 pounds, and an application of 200 pounds acid phosphate and 160 pounds kainit gave an increase of 613 pounds.

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD, BALTIMORE, April 20.

In the phosphate market everything is very quiet and the volume of transactions limited in character. The demand from manufacturers of fertilizers is very meagre at the moment, as they are well supplied, and until the season opens there will be very little doing. Advices from Europe report prices for Florida and South Carolina rock firmer, and at producing points miners are also firmer in their views. The charters during the week are few in number, only one being reported. The schooner R. S. Patterson has been taken to load at Charlotte Harbor, Fla., for Baltimore. There are no arrivals reported, but a number of vessels are expected with rock during the next week. Prices continue steady, and are quoted as follows: Ashley river rock is quoted \$4.75 and Charleston \$5.00, and for future delivery \$3.75 to \$4.25 for 50 to 55 per cent. product. Florida river pebble, 60 per cent. product, is quoted \$3.75 to \$4.25 f. o. b., and land pebble, 67 to 70 per cent. product, \$5.00 f. o. b. Florida hard rock is firm at \$8.00 to \$8.50 f. o. b. Fernandina, Fla.

FERTILIZER INGREDIENTS.

The business for the week has been light, and the demand is not urgent, and is principally for small lots for prompt delivery. Manufacturers are not purchasing at present, and there will be very little done for several weeks to come. Prices of blood, fish, tankage and other ingredients are steady and unchanged. We quote as follows: Blood, 2.60 to 2.70 per unit f. o. b. Chicago; tankage, 7 per cent. of ammonia and 20 per cent. bone, \$27.00 to \$30.00 per ton Baltimore; brimstone, best unmixed seconds and thirds, \$18.50 to \$20.00; nitrate of soda, 2½ cents per pound and 2.20 to arrive; ground bone, \$28.50 to \$31.00 per ton of 2000 pounds; dissolved South Carolina phosphate rock, \$11.50 to \$12.50 per ton in bags for car lots; dried fish in job lots, \$30.00 to \$32.00; wet and acidulated, \$18.50 to \$20.00; dissolved bone black and dissolved bone ash, 18 per cent., \$20.00 to \$22.00; kainit, \$11.50 to \$12.00 per ton of 2000 pounds in bags; muriate of potash, \$2.00 per 100 pounds for spot goods of 80 per cent.

CHARLESTON, S. C., April 17.

The volume of business in phosphate has been rather light during the week, but the market holds steady under late reports from Europe. The outlook for mining is considered better, and holders are not disposed to sell at present figures. Manufacturers at domestic ports are not purchasing at the moment, it being between seasons. It is thought when business opens that sales and shipments to Northern ports will be larger than usual. The only shipment reported during the week was a cargo of 600 tons of rock per schooner Laura E. Messer to Weymouth, Mass. The business in freights is better, and \$2.40 per ton (and loaded) has been paid to carry rock to New York. The list of values in phosphates continues unchanged and is as follows: Crude rock \$3.75 to \$4.25 f. o. b., hot-air-dried \$4.75 to \$5.00 f. o. b. and ground rock \$7.50 to \$7.75 f. o. b. in bags.

The comparative exports of crude phosphate rock and ground from the port of Charleston from September 1, 1892, to April 14, 1893, and for the same time in 1891, are as follows:

Destination.	1892-93.		1891-92.	
	Crude.	Ground	Crude.	Ground
Baltimore.....	23,710	.....	21,491	.....
Philadelphia....	10,893	.....	11,081	.....
Boston.....	.....	.....	.....	.....
Elizabethport....	.....	.....	.....	.....
Wilmington, Del.	3,179	.....	600	747
Barren Is., N. Y.	.....	.....	1,673	.....
New York.....	6,717	1,641	7,763	1,613
Mantua creek....	1,319	.....	2,057	.....
Weymouth.....	8,620	.....	12,857	.....
Richmond.....	4,999	.....	5,264	.....
Seaford, Del....	600	.....	600	.....
Newton ck., N. J.	1,078	.....	1,078	.....
Wilmington, N. C.	665	.....	450	.....
Welsh Point.....	.....	.....	1,890	.....
Orient, L. I.....	.....	.....	.....	.....
Other ports....	3,390	.....	3,290	300
Total exports....	65,180	1,641	70,094	2,660
By railroads....	.....	.....	35,600	1,613
Foreign ports....	175	.....	442	.....
Grand totals....	65,355	1,641	106,096	4,273

SHIPMENTS OF CRUDE PHOSPHATE ROCK FROM THE PORT OF CHARLESTON, S. C., FOR MARCH, 1891, 1892 AND 1893:

Domestic Ports.	1891.			1892.			1893.		

Baltimore.....	4,285	3,760	5,485	.....	.....	.....	.....	.....	.....
Philadelphia....	.....	.....	1,350	.....	.....	.....	.....	.....	.....
New York.....	775	1,380	1,260	.....	.....	.....	.....	.....	.....
Weymouth, Mass.	1,750	4,195	850	.....	.....	.....	.....	.....	.....
Wilmington, Del.	1,526	.....	1,101	.....	.....	.....	.....	.....	.....
Barren Island, N. Y.	1,990	.....	.....	.....	.....	.....	.....	.....	.....
Richmond, Va....	1,375	771	550	.....	.....	.....	.....	.....	.....
Wilmington, N. C.	1,100	.....	1,402	.....	.....	.....	.....	.....	.....
Elizabethport, N. J.	650	.....	.....	.....	.....	.....	.....	.....	.....
Cartaret.....	765	.....	.....	.....	.....	.....	.....	.....	.....
Newark.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
S. C. R. R.....	1,774	1,999	.....	.....	.....	.....	.....	.....	.....
C. & S. R. R.....	2,256	2,163	377	.....	.....	.....	.....	.....	.....
N. E. R. R.....	1,147	1,335	819	.....	.....	.....	.....	.....	.....
Foreign.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guttenburg.....	95	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	17,714	15,378	15,193	.....	.....	.....	.....	.....	.....

The shipments of ground phosphate were fifty-six tons for March, 1892, and 600 tons for March, 1893.

FERTILIZER INGREDIENTS.

It is just now about the close of the season, and the market is quiet, with the volume of trade moderate. Manufacturers are not buying at the moment, and there is no special inquiry. Ingredients continue scarce, with prices firm. Acid phosphate is quoted \$12.00 to \$12.50; ash element, \$12.50 to \$12.75; kainit, \$12.00 to \$12.50; ammoniated fertilizer, 2½ per cent., \$18.00 to \$19.00, and 1 per cent., \$17.50 to \$18.50; marl, \$7.00 to \$8.00; brimstone to arrive, \$24.00 per ton for best unmined seconds, and nitrate of soda (direct) per 100 pounds, \$2.50. The shipments of fertilizers from the port of Charleston for the month of March were 79,014 tons, and for the corresponding month of 1892 they amounted to 53,745 tons, showing an increase of 25,269 tons.

Phosphate and Fertilizer Notes.

A BILL was introduced in the Florida legislature on the 12th by Mr. Wilder, of Hillsboro, Fla., amending section 2 of chapter 4043 as follows: "For every ton of phosphate rock or phosphate deposit mined or removed from beds of navigable

streams analyzing 50 and not exceeding 65 per cent. bone phosphate of lime, parties so mining shall pay the State twenty-five cents; fifty cents for every ton analyzing 65 per cent. and not exceeding 75 per cent., and seventy-five cents for every ton analyzing in excess of 75 per cent. Persons so mining shall report quarterly to State board of phosphate commissioners and make quarterly payment to the State treasurer. Before commencing operations parties must enter into contract with said State board and file bond to be approved by the board."

TWO thousand tons of phosphate rock, valued at \$20,000, were shipped from Punta Gorda, Fla., to Hamburg, Germany, during the month of March, 1893.

ONE of the large drying-houses and two freight cars were destroyed by fire on the 4th inst. at the French Phosphate Co.'s mines, near Anthony, Fla.

THE bark Heinrich Botel, which left Fernandina, Fla., on the 16th of March for Hamburg with a cargo of phosphate rock, lost some of her sails and had her wheel broken.

THE Fort White Phosphate Co., of Fort White, Fla., is putting in machinery to double its capacity.

A DISPATCH from Orangeburg, S. C., reports the discovery of what has proved to be a bed of phosphate at a depth of thirty-five feet below the surface. The bed is reported solid and about five feet thick.

THE British steamship Vectis was cleared from Savannah last week for Birkenhead by J. M. Lang & Co. with 2200 tons of high-grade phosphate rock.

THE steamship Driffeld, drawing twenty feet nine inches and loaded with 3811 tons of phosphate rock, destined for Hamburg and Tanning, went over the bar of Brunswick, Ga., on the 14th inst. She passed out through the commercial channel upon a rise of six feet by the tide-table.

THE machinery of the Georgia Phosphate & Mining Co. at Boston, Ga., was sold on the 15th inst. to the highest bidder to cover county taxes. Mr. Norton has moved the mills of the property of the Georgia Phosphate & Mining Co., and proposes to have the machinery running in the next few days.

ABOUT 40,000 tons of phosphate were shipped from Fort White, Fla., during the month of March, and it is said that the shipments will amount to 75,000 tons per month when all the companies get in full operation.

MESSRS. SMITH, ANTHONY AND TOWNSEND, the principal owners of the Capital Phosphate Co. in the Early Bird mining district, sixteen miles west of Ocala, have, by the decision of the United States court, been given possession of 320 acres of mining lands claimed by Davis & Eastman, who purchased the same from agents of the Florida Central & Peninsular Railroad Co.

THE Marietta Phosphate Works, near Fort Meade, Fla., were totally destroyed by fire on the 12th inst. It is supposed that it was caused by hot phosphate in the dry bin. The estimated loss is about \$3000. The plant was situated a quarter of a mile from Peace river, where the dredgeboats were mining for river pebble. The fire was confined to the dry and wet bin.

THE Florida Phosphate Exchange & Export Co. is receiving letters daily from Sweden, Denmark and other European countries making liberal propositions, asking for quotations, etc., which will result in future business. Mr. John E. Tyler, secretary and manager, has left for Florida to make arrangements with phosphate men and buy phosphates of different grades.

THE steamship Asiatic Prince sailed from Fernandina, Fla., on the 13th with a cargo of phosphate for Genoa.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

Cottonseed Oil in Holland.

ROTTERDAM, April 8.

The market for cottonseed oil is very dull in our country, and although the quotations are lower there is no demand, and hardly any business is doing. The price of choice butter oil is now forty-three cents ex warehouse, but probably forty cents should not be difficult to obtain.

The manufacturers of butterine cannot sell butter at high price, and will buy, therefore, the material—margarine, lard and oil—only at lower price.

Margarine and lard are much lower, and oil is now following this movement.

The weather has been warm the last week, and therefore the butter-makers use very little oil. Owners of oil are not inclined to sell at much lower prices. If there is not much oil still in America they do well, and probably the butter-makers will be enforced to buy later on at good prices; but as good quantities arrive every week from America, it seems that the stock is not small.

The question is, therefore, will we get still more oil from America or not. In the first case prices will decrease considerably; in the second case it is probable that prices will remain high and that the buyers will be compelled to pay the high prices.

G. W. SANCHES.

The Cottonseed-Oil Market.

NEW YORK, April 19.

Editor Manufacturers' Record:

The amount of business during the past week has been very small, and there is no particular change to report in the general situation, so far as this market is concerned. Strictly prime crude, satisfactory by test to buyers, sold at forty-one cents, but the business has been at forty cents, and at the close today a lot of 100 barrels was sold at thirty-nine cents to arrive. Nearly all the demand has been for crude. Off quality remains a drug in the market and can be quoted at thirty to thirty-two cents, with the chances in favor of even a lower price being obtained even if a good sized lot be offered for sale. Prime yellow has been sold in a small way at forty-six cents, and is offered at that price without having much attention. Prime white is nominally forty-eight to forty-nine cents without any business, excepting in small jobbing quantities. Exporters are apparently quite indifferent. Stocks of oil here are moderate, but there is a fair amount of oil which is not held because people believe in better prices, but rather is held simply because to attempt to force sales would seriously disturb present values. Reports from the South indicate that the holdings are small and orders have been light until lately, when there has been some inquiry from the West for oil on the basis of forty-two cents f. o. b. loose at the mills. This price is fully three cents higher than can be realized in this market at present. There is nothing in the way of an export trade in goods upon which oil depends to give any encouragement, and while home trade is more active in compound lard, and there has been some demand from France, yet the general movement is not significant. Germany has hardly furnished an important order for the compound product, but has been asking about pure refined lard despite its additional cost of two cents per pound above the compound. This change of inquiry, however, may be looked upon as due to the season and the approach of warm weather.

General trade affairs are very dull and depressed, and cottonseed oil shares in it. With declining markets for most commodi-

ties it would take some specially favorable feature to give us an active market in cottonseed oil. The financial situation is one of uncertainty and uneasiness, and must exert its influence indirectly upon all branches of trade. Were there anything like a usual demand for oil we would see a temporarily better market, at least, because the supplies would have been found insufficient, but the protracted dullness has certainly reduced the consumption and made buyers indifferent, and thus given us a dull and easier market, even at the moderately low prices that are now current. There is some disposition to believe that the market is about bottom, but it has not taken shape in any confident or fairly good buying of oil, while the steady shipments of oil from the South, although moderate, are generally sold at the best price obtainable ex dock in accordance with instructions. We cannot see any lower prices unless general trade conditions continue unfavorable, yet, as we have before stated, we cannot see very much to the market, unless it be much later in the season, when the possible lateness of the new crop of oil may give us a demand that will help prices.

HOPKINS, DWIGHT & CO.

The Season's Work of the Dillon (S. C.) Mill.

The season's business of the cottonseed-oil mill at Dillon, S. C., has been wound up in order to make certain improvements during the summer and prepare for the fall season. The work of the past season has extended over six months and the seed consumed 1775 tons, oil manufactured 78,878 gallons, meal 600 tons, fertilizers 700 tons, cotton linters fifty bales, and cotton ginned 675 bales. In two weeks 700 tons of fertilizers were sold, and the value of new machinery added to the mill \$1000. The company has a capital of \$20,000, with \$15,000 paid in. The officers of the company are: Thomas A. Dillon, president; S. S. Rosier, secretary and treasurer, and C. W. Davis, superintendent. The officers are all representative men and thoroughly energetic, and are well satisfied with their success.

Cottonseed-Oil Notes.

A CHARTER has been filed with the secretary of state at Austin, Texas, by the Bruceville Cottonseed Oil Co., of Bruceville, Texas, with a capital of \$50,000. The incorporators are M. L. Board, H. C. Blackwell, G. B. Harris, E. R. Tatum and L. P. Field, all residents of McLennan county.

THE exports of cottonseed oil from the port of Baltimore for the week ending April 14 were 25,000 gallons to the Netherlands, and since September 1, 1892, the shipments were 302,028 gallons, of which Brazil took 5002 gallons, England 22,000 gallons, France 6168 gallons, Germany 6700 gallons, and the Netherlands 262,158 gallons.

THE foreign shipments of cottonseed oil from the port of New Orleans since September 1, 1892, were 2,083,450 gallons, and for the corresponding period in 1891-92 the exports were 3,157,050 gallons.

THE Learned saw mill at Natchez, Miss., was given an order on the 13th inst. for furnishing the material for building the large cottonseed-oil mill to be located in Vidalia, La., opposite Natchez. It will be erected by the Standard Oil Co. at a cost of \$75,000 or \$100,000, and will be ready for business next fall.

WORK on the cottonseed-oil mill at Italy, Texas, has commenced and will be pushed forward vigorously to completion, to be ready for business when the cotton season opens.

THE British steamship Heathfield was loading with phosphate at Fernandina, Fla., on the 15th inst.

Manufacturers' Record.

PUBLISHED EVERY FRIDAY BY THE
Manufacturers' Record Publishing Co.
MANUFACTURERS' RECORD BUILDING,
Lexington and North Streets,
BALTIMORE.

EDWARD H. SANBORN, Managing Editor.
THOMAS P. GRADY,
Special Southern Correspondent.

WESTERN OFFICE—535 and 537 The Rookery,
Chicago, Ill.
CLARENCE P. DAV, Manager.

NEW YORK OFFICE—39 and 41 Cortlandt St.
H. W. NEWTON, Manager.

NEW ENGLAND OFFICE—952 Exchange
Building, Boston.
S. I. CARPENTER, Manager.

FOREIGN AGENT—REUTER'S TELEGRAM CO.,
Limited, London.

Reuter's Telegram Co., Limited, of London, are the authorized foreign agents for the MANUFACTURERS' RECORD. Foreign advertisers are referred to the various Reuter offices in England, on the Continent, in the Colonies and other parts of the world for rates of advertising. Contracts should be placed and payments therefor should be made through Reuter's Telegram Co., Limited.

SUBSCRIPTION, - - - \$4.00 a Year.
TO FOREIGN COUNTRIES, - - - 26s. 6d. a Year.

The first issue in each month will be mailed for One Dollar per year to subscribers in the United States, or Eight Shillings to foreign countries in the Postal Union.

BALTIMORE, APRIL 21, 1893.

FOR some months past the efforts to secure deep water at Aransas Pass, Texas, have been lagging because of insufficient money to carry out the plans. Recently a new company, having, it is said, over \$1,000,000 to draw upon, has assumed charge, and the prospects are that work will be pushed to a speedy completion. The results will be of the greatest benefit to the entire State of Texas, and it is to be hoped that nothing will interfere with their early realization.

THE sinking fund commission of South Carolina, which had power granted it by the legislature about a year ago to assume control of and lease the oyster beds of that State, has now taken the matter in hand and is granting leases to responsible applicants. By a wise provision of the law each lease is for twenty years, and during each year the lessee is required to replant one-twentieth part of his territory, thus insuring the replanting of the entire area by the time the lease expires. The rental charged will vary from ten cents to one dollar per acre annually.

THE Department of Agriculture has secured samples of Egyptian cottonseed which it proposes distributing among various experiment stations with a view of ascertaining whether it can be satisfactorily grown in this country and be used in place of the Egyptian staple now imported, amounting in value last year to a little over \$2,000,000. It seems rather odd that we should be trying to raise an Egyptian variety of cotton, while the descendants of the Pharaohs are worrying themselves over a similar effort to raise a cotton like ours from our seed, which they imported for that purpose, but the successful introduction of the Egyptian variety in this country would still further strengthen our supremacy in cotton.

A RECENT report states that a gentleman in Opelousas, La., has just com-

pleted an invention which will lift water from a well or stream to any height, regardless of atmospheric pressure, and make the flow of water keep up continually. By simply placing this invention in a common well the latter at once becomes an artesian well and throws forth a stream of water. The only description of this machine yet made states that these wonderful results are caused by a series of vacuums which the water creates. A machine of this description is what the human race has been looking for ever since Adam went down to the creek for water with which to boil his potatoes, and the public will await with eager interest a further description of it.

A Plan for Stimulating Southern Immigration.

The general interpretation of the word immigration does not convey the real significance of the present immigration agitation in the South. The present efforts are not designed to stimulate a southward movement of cheap foreign labor, but to secure a much larger influx of home-seekers. The South does not need more or cheaper laborers of the unskilled classes, for this element in our industrial economy already exists in abundance and at a cost that meets all present requirements. Furthermore, the introduction into the South of the cheap foreign-born labor which now exists in such large volume in the North would create another troublesome problem in the difficulty of effecting an affiliation of the colored race and the foreign-born laborer. From nearly every point of view extensive immigration of mere day laborers is not desirable for the South.

The present need of the South is for small capitalists, industrious, frugal and intelligent men, possessed of moderate means and prepared to become citizens, owners of their homes and integral parts of our industrial, social and political economy. Such men add to the wealth and prosperity of any section, and constitute the most desirable factors in the development of any country.

Admitting this, the question resolves itself into one of ways and means by which such immigrants can be brought into the South in greater numbers than heretofore. Leaving out of consideration what may be accomplished among the present population of the North and West, and disregarding also the temporary opportunities that are presented in connection with the World's Fair this summer, the most practical plan appears to be one involving work in those foreign centres from which the South must expect to draw its desirable immigrants. Efforts directed towards diverting immigrants southward after their arrival in this country are simply a waste of time, energy and money which can be made immensely productive when used in other directions. Most of the desirable immigrants come to this country with through tickets to destinations chosen before starting, and it is impracticable to change their plans. The only aimless immigrants are those whose means are sufficient only to pay their steamship passage. They are chiefly unskilled laborers of the lowest order, and they settle in the Eastern States, where they find employment in the mines, upon public works and about

large manufacturing establishments, where cheapness of labor is the only consideration and skill is not a requirement.

To carry out the plan that seems to promise the largest and most satisfactory results it is necessary to have the co-operation of three factors, which are these: First, the joint efforts of all the Southern States that care to participate in the work; second, the steamship companies, and third, the railroads in this country. In rough outline the plan is as follows: A number of immigration and information bureaus can be established at advantageous centres in Europe, each in charge of a competent agent, well supplied with the proper literature, railroad and steamship rates and the necessary information about Southern conditions and opportunities. An organization of this sort would make possible the selection of the most desirable classes of immigrants and make sure their settlement in the South by determining their destination before starting.

To make more clear the advantages of this plan it is necessary to consider more fully some of the essential practical details. First and most important of all is the preparation of the literature for such work. Intending immigrants want specific information, not vague generalities. It is necessary to specify localities and give prices of land and furnish very definite details. A few years ago the commissioners of agriculture of New Hampshire compiled and published, at small expense, a catalogue of farms in that State that had been abandoned by their owners on account of unproductiveness. In one year one-quarter of these farms were sold and reoccupied, many of the purchasers being foreigners of small means. If by such simple practical methods so great results can be accomplished among the bleak hills of New Hampshire, where every acre yields stone enough to fence it, how much greater accomplishments are possible under the favorable conditions that exist everywhere in the South?

The selection of working centres abroad is another important detail, and one upon which the success of the whole plan largely depends. A brief study of the immigrants who are now coming to this country, or who have come here in years past, will give a preliminary idea on this point. Among the home-seekers who come to this country and locate in the West and Northwest the German and Scandinavian elements predominate, while the poorer laboring classes, who start at the landing point in search of work, or who settle in the great seaboard cities, are composed chiefly of Irish, Poles, Hungarians and Italians. These facts point to Germany and Sweden as the most productive fields in which to work, Germany probably offering the largest opportunities. England, Scotland and Switzerland are also good territory.

Agents maintained jointly by the Southern States offer the most economical and the most efficient means for conducting such work. The expense to each State for fourteen foreign agents, representing fourteen States, would probably be no greater than the cost of maintaining a single representative. With a division of the expenses of such an organization among a number of States and several transportation com-

panies the cost to any one party in the arrangement would be slight, so small that it could readily be borne by private subscription in the event of any inability to provide for it out of public funds.

The co-operation of transportation companies in such a plan is essential, in order to add the inducement of low through fares by steamer and rail. In the successful operation of such a plan the transportation companies would be the first to reap direct benefits in actual cash.

Whether this plan as outlined requires modification in its details can be determined best by a thorough investigation and careful study of conditions at home and abroad. This plan, however, embodies principles that must be applied in order to accomplish the largest and most satisfactory results with the smallest expenditure of labor, time and money.

The Importance of Municipal Sanitation.

It is a pleasure to note the awakening interest manifested by the larger Southern cities in the matter of better sanitation and sewage disposal. Apart from those actually engaged in such improvements, Meridian, Miss., Vicksburg, Miss., Macon, Ga., and Tampa, Fla., have the matter under consideration, and in New Orleans the preliminary work of surveying preparatory to laying out the line has already been commenced. While many cities in the South are well sewered and drained, there are others in which neither of these matters has been given the attention it should receive.

No city ever made a better investment of its money than that which has gone into the construction of a properly built sewer system. In connection with proper sanitary measures it secures the general health of the city and freedom from epidemics of disease, and in this way promotes confidence on the part of those who think of becoming citizens and of incoming capital. Memphis is a striking illustration of the good results coming from such a system. Had the city authorities not taken the steps they did after the yellow-fever epidemic in 1878, the city would likely have become little more than a half-deserted town, with property worth little or nothing, and no business carried on excepting during winter, when danger from fever had passed. The sewage system, which was put in shortly after the epidemic, and other sanitary measures which were adopted effected a return of confidence in the place which has resulted in building it up into one of the leading centres of the South.

Good sanitation is of particular importance this year in view of the possibility of an outbreak of cholera. While it is to be hoped that such a disaster may not occur, still the possibility is sufficient to justify every effort toward cleanliness, and no Southern town or city can afford to neglect any precaution to avert even the remotest chance of such a catastrophe. The efforts being made at Meridian and the other places mentioned will no doubt result in the installation of a complete sewage system, and their plan should be followed by every municipality and town in the Southern States.

The Present and Future of Gas and Electricity.

[Abstract of an article by Joseph Gwynn read at the ninth annual meeting of the Ohio Gas Light Association at Columbus, Ohio.]

The treatment which has been accorded this subject will not, in all probability, commend it to a strictly gas man, but, none the less, electricity is in our midst, and with its rapid strides is advancing with unparalleled rapidity in all directions. Electricity has come to stay, and gas managers must wake up and be in shape to give the public whatever kind of gas it demands. That electricity is a full-fledged competitor of gas there is no doubt. It has, practically speaking, an unlimited field to fill and more opportunity for rapid strides and advancement than has gas, and while it has some disadvantages, regarding it from an illuminating standpoint, yet, on the other hand, it has some advantages over gas.

In order to get at the inwardness of both branches of the industries and to treat them fairly from an unbiased standpoint, and produce a paper based on actual facts and figures, and not one written from my own views on the subject, I communicated with upward of 200 gas and electric companies in different parts of the United States in order to obtain as reliable data as possible on the subject to be treated. In order to give each one opportunity to consider the subject for himself and to reply on his own judgment as the best course to pursue in the future, I append a few figures in order to fully show the advancement of both branches of the business. To show the rapid advancement of one branch of the electric business, which is arc lighting, I append the following figures, showing the growth of the carbon business: Upon the introduction of the arc-lighting business for the year 1879, to the year 1881, only a small amount of carbons were manufactured, and from what data I can obtain the total sales of carbons would not exceed 1,000,000 per annum, with price ranging from \$120 to \$150 per thousand. From 1881 to January 1, 1892, the amount of carbons manufactured and sold in the United States has gradually increased, until today there are upwards of 145,000,000 of carbons being manufactured and sold annually, with price ranging from \$9.00 to \$10.00 per thousand. From the above figures it will be seen that the arc-lighting business has shown an average advancement of over 12 per cent. per annum for the past twelve years. While the arc-lighting business has shown a rapid advancement for mainly public lighting, what effect do we find this has had upon public lighting by gas companies? Today, out of over 928 gas companies in the United States we find of that number only 435 have contracts for street lighting, and 493 have lost the street-lighting business entirely, which has been displaced by arc and some few incandescent lights; while, on the other hand, a great many of the gas companies who still do street lighting do only a limited business in this line, as street lighting by gas is being gradually displaced by electricity, and will eventually be a thing of the past. Let us again consider the two great competitors from a commercial-lighting standpoint, and what are the results? The aggregate gain in output of twenty-seven companies for the year 1891 is 6.56 per cent., and for the year 1892 6.61 per cent., or a net gain of 13.61 per cent. for the output of 1892 over that of 1890. For comparison, I will now show the aggregate gain of the commercial electric-lighting business. In 1891 the aggregate number of incandescent lamps then installed by fourteen electric companies was 16,475, and in 1892 the aggregate number of lamps then installed had reached 33,238, showing a net gain of over 100 per cent. in the past year. From the above figures it will be plainly seen that the net increase of commercial incandescent lighting for the

past year over gas is 93 per cent. In addition to the incandescent-lighting business of the above electric companies I find that in 1890 they had then installed 1047 commercial arc lights, and in 1891 they had increased to 1149 and in 1892 to a total of 1620 lights, showing a net gain in the past two years of over 54 per cent.

Again, let us look at the lighting question. It has been claimed by most gas managers that electricity could not compete against gas for day lighting, as the business was not sufficient to justify an electric company to operate day circuits only in large cities. In this respect I wish to say they have been mistaken, for I find that quite a number of electric companies in cities of 20,000 population and under are operating day circuits, or, in other words, are operating their plant for the full twenty-four hours. I am asked how they can afford to operate a day circuit without continual loss. I wish to reply to this question by saying that, in addition to what lights are required, the constant demand for ventilating fan motors, from which a good revenue is derived, enables an electric company to operate a day circuit at a small profit. To give you an idea of the growth and prosperity of the ventilating-fan-motor business, which is being rapidly introduced by electric companies, I append a few figures obtained from the manufacturers as to the sale of fan motors for the years 1891 and 1892. In 1891 the sale of fan motors by four of the principal electric companies was 2012. In 1892 the sale of fan motors by the same companies was 5093, and the companies above referred to stated in their report to me that from the present outlook the sales of fan motors for the year 1893 will be 50 per cent. greater than for the previous year. In order to further enlighten you on the possibilities of electric companies operating day circuits, I wish to call your attention to the following figures, showing the enormous increase in the sales of motors used for isolated purposes and independent of street-car use. In the year 1889 the sales were, practically speaking, nothing, as the reports obtained show an aggregate sale of 175 horse-power; in 1890 the aggregate sales of motors of five of the principal electric companies show 6584 horse-power; in 1891 the aggregate sales of motors by six of the principal electric companies were 9657 horse-power, and for the year 1892 the aggregate sales of seven of the principal electric companies were 19,216 horse-power; or, in other words, the total sales of motors for the past three years by seven of the leading electric companies show an aggregate of 35,457 horse-power. This branch of the business, if you will stop to think, comes in competition with the gas-engine business, and while I have no figures to show the aggregate horse-power of gas engines sold for the same period, yet at the same time I venture the assertion that 25 per cent. of the sales of motors would be a fair estimate for the sales of gas engines. This branch of the motor business, looking at it from an electric standpoint, is not as easy to handle nor possibly not as profitable as is the gas-engine business to gas companies. While the gas company can furnish the gas required for gas engines through the same line that is used for illuminating purposes and without increased expense, it is impossible for electric companies to furnish current for motor use from the same circuit used for lighting. As I stated above, fan motors can be operated on the electric-lighting circuits, but when an electric company undertakes to operate anything larger than fan motors from a lighting circuit the continual stopping and starting of the motor will cause a variance in the lights.

There is no doubt but that electricity has made rapid advancement over gas in the past, and while it will continue to advance possibly more rapidly than will gas, yet, at

the same time, in the future the advancement will be somewhat checked, as the novelty has worn off. Yet, on the other hand, the continued improvements, which are many and great in electrical appliances, will continue to make the electric business more simple and reliable, and will still hasten its progress rapidly on for some years to come. In conclusion, I wish to make mention of a few facts that may be of interest to gas companies. My advice to all is to stand firm and push your business with all the vitality you have. Strive to make a good quality of gas as is possible at a minimum cost, and sell at the lowest price possible to give a fair return on the capital invested.

Exploration of the Indiana Gas District

ALEXANDRIA, IND., April 17.

The Alexandria Land Syndicate recently commissioned Prof. C. R. Boyd, of Wytheville, Va., the well-known geologist, to make an exploration of the Indiana gas district. From his report, which has just been issued, the following extracts are made:

"After carefully summing up all the evidence I have been able to collate, I feel quite confident that the higher surfaces of the most porous portion of the Trenton rock lie about three and three-quarters miles northwardly and northeast of Alexandria, in Madison county. This reconciles itself to the conformation of the country, as well as to the generally northwesterly trend of the Cincinnati arch or anticlinal.

"As you proceed southeast through Muncie you constantly ascend, it is true, but you are gradually leaving the most porous reservoirs for gas, until, when you have reached Muncie and vicinity, the average yield of wells begins to show a marked diminution.

"The entire valley of the Mississineway river, from the general conformation, lies northeast of the highest levels of the rock all along its length; so that, when you go northwest along that stream or down stream, you are constantly approaching the levels in the gas rock which yield petroleum and salt water in greater abundance, pursuing the natural law of the arrangement in the rock of gas, oil and salt water according to their specific gravities.

"But about Alexandria and vicinity no well has so far penetrated to either oil or salt water, though several of the wells have penetrated into the Trenton rock fifty feet; fortunately they have only secured dry gas in uniformly large quantities in comparison with the yield of wells at all other places.

"The twenty-one wells at Alexandria and vicinity, in all cases where measurements could be made of the entire flow of each well, and where the size of the discharge pipe was three inches in diameter, have an average flow of 8,000,000 feet of gas in twenty-four hours.

"At Muncie, on the southeast margin of the productive field, this flow, in same diameter of pipe, averages a little over 2,000,000 feet per well in twenty-four hours. This is the result as shown by data gathered to date.

"At Marion, on the northern border of the productive field, the daily flow in all wells, so far as observed, is not in excess of that at Muncie. The wells of Marion, as well as those of Muncie, have been invaded by salt water. Great care is therefore exercised not to permit any of their wells to flow at anything like their full capacity, the object being to permit the gas to have an opportunity to press the water back. At Alexandria and vicinity, as I have just remarked, no salt water has as yet shown itself, although wells have been sunk fifty feet into the Trenton rock about here, while the other points mentioned have their wells driven only twenty to thirty-three feet into the Trenton rock.

"At Noblesville the average of daily flow of wells, though on the southwest margin of the productive field, is between

the readings at Alexandria and Muncie, Alexandria having the advantage by at least 2,000,000 feet per well.

"At Anderson, on the southern margin of the productive gas field, estimated also for flow through three-inch pipe, is about 4,500,000 cubic feet per day. At Elwood, on the western margin of the productive field, the average flow is less than it is at Anderson.

"I have no doubt the daily capacity of many of the wells about Alexandria, had it been possible to have measured them when completed and then calculated by the excellent method of Professor Robertson, as shown both by Professor Orton and Dr. Phinney, the flow per day in a three-inch pipe would reach 10,000,000 to 12,000,000 cubic feet per day, and that, too, over a sufficient area to show a greater body of greater depth of porous rock in the Trenton rock about here than anywhere else in the field, all the records being carefully compared. A careful study of the results obtained from the records of the twenty-one wells bored within a radius of two and a-half miles around Alexandria proves this quite conclusively, proving the uniformity of flow in wells of the same size, as well as the homogeneity (so to speak) of the rock normal to the best conditions for the production of gas in large volumes.

"This record of flowage, taken from the most reliable records and in the light of my own measurements, constrains me to locate the greatest flowage area within and around Alexandria, with a tendency to concentrate itself northward of Alexandria rather than southward.

"The average depth of wells at Anderson from surface to top of Trenton rock is about the same as it is at Alexandria, but in no case, as at Alexandria, have the wells penetrated over fifty feet into the Trenton rock without finding salt water.

"At Alexandria the De Pauw Window Glass Works' well, one-half mile east and one-quarter mile south of the city centre, went down sixty-eight feet into Trenton rock, finding nothing but dry gas. In no other part of the field has this been the case. So that, all the above evidence being taken together, it is conclusive that Alexandria has a most decided advantage in point of elevation, in the area of porous gas-producing rock possessing depth of reservoir and in other points of importance over any other place in the entire gas field.

"Carefully measuring this high-pressure gas field as to area and finding its geographical centre, you are carried within three and three-quarters miles of Alexandria on the northeast, but adding to this largest area the two smaller areas west and south of the largest one, altogether 1600 miles, the centre is brought within the corporate limits of Alexandria.

"Thus a remarkable coincidence is found to exist, when you consider the centre of the most porous field of greatest depth (measuring from top of Trenton rock), the geographical centre and the general topography of the great flattened dome or anticline, under whose impervious cover the reservoirs of gas are found, all of which centres are found to approach each other almost to a point of actual coincidence at Alexandria. To heighten and emphasize this powerful array of natural phenomena, Alexandria and the neighboring territory for quite 600 square miles around Alexandria as a centre positively refuse to permit the great cities and outside centres to enter this reserve with their pipe lines, thus practically giving many years additional life to the gas supply at Alexandria."

This report furnishes ample scientific endorsement of all that has been claimed for Alexandria as the point of most abundant and lasting supply in the entire gas field.

THE erection of a cotton factory at Covington, Ga., is talked of.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 226 and 227.]

Work Commenced on the Columbia Mills.

Work has begun on the Columbia Mills Co.'s mammoth mill at Columbia, S. C., on the canal, and the city will enter upon what will undoubtedly be a long era of prosperity. Mr. Oliver, the chief promoter of the company, has let contract to William Chapman & Co., of Providence, R. I., for the erection of the buildings, and the commencement of work on these is expected this week. Orders for 200 barrels of cement to be used for the foundation have been awarded to a Columbia firm. The city's two brick-yards will be pushed to their utmost capacity throughout the summer to furnish brick enough, and the stone quarries will also be kept very busy.

Another Mill Contemplated at Marietta, S. C.

Mr. William Wilkins, of Greenville, S. C., contemplates the erection of a cotton factory in Greenville county about one and a-half miles from Marietta, and with that end in view is endeavoring to organize a \$250,000 company. Mr. Wilkins proposes to have a plant of 10,000 spindles and 300 looms, the latest and best improved machinery being installed. The site which he has selected is at a point on the waters of the Middle Saluda river, where the horse-power that can be obtained is estimated at 325. Mr. Wilkins is working energetically to secure the requisite capital, and as soon as he has \$150,000 subscribed will commence work.

A New Mill at Chester, S. C.

The Catawba Mill Co.'s new spinning mill at Chester, S. C., has just been completed, and will be a valuable acquisition for the Chester gingham mills, obviating the necessity of purchasing yarns from distant mills. The board of directors of this company are composed of the most progressive men in the State and have erected a mill which is first-class in every respect. The building of the Catawba spinning mill is of brick, 350x80 feet, with an adjoining picking-room 80x40 feet. It is located on a site between the Richmond & Danville, and Seaboard Air Line Railroads, one mile from the business centre of Chester. The machinery is of the most approved patterns and design, the engine being a splendid piece of workmanship of 400 horse-power, which will receive steam from four tubular boilers of 100 horse-power each. The engine is of the Reynolds-Corliss type, and made by Edward P. Allis, of Milwaukee, Wis. The boilers were built by the Erie City Boiler Works, of Erie, Pa. The machinery, consisting of the necessary machines belonging to the picking-room and of 11,000 spindles, is from the following establishments: The cotton-openers, lappers and automatic feeders are from the Potter & Atherton Machine Co., of Pawtucket, R. I.; the spinning and spooling from the Whittin Machine Works, Whitinsville, Mass.; the roving from the Providence (R. I.) Machine Co., and the warpers from the Lowell Machine Shops, of Lowell, Mass. The product of the mill will be No. 40 warp and No. 26 filling, which will be the finest yarn manufactured in the South. Mr. J. W. Dunovant is president; S. B. Latham, secretary and treasurer, and J. V. Dustin, superintendent.

A New Open-Shed Loom.

The Gilbert Loom Co., of Worcester, Mass., has brought out a new and improved heavy and substantial open-shed loom, with improved harness and shuttle-box motions,

and constructed to use one or two beams, as desired.

The general construction of the harness and shuttle-box motions differs materially from the corresponding parts in other makes of looms in that these motions are operated positively. The mechanism, consisting of racked jacks and vibrator gears, used to give movement to the harness and box motion, is never out of gear, and consequently there is less wear of the parts, with less expense for repairs. The machine is operated through knife bars, rack jacks and geared vibrators, the latter being attached to elbow levers, the knife bars and racked jacks having a horizontal motion, the harness being attached to the elbow levers through straps passing over sheaves, and by this arrangement of the vibrator gears and elbow levers a perfect angular shed is secured, with all of the straps of equal length.

All of the parts in the head motion are easily reached for repairs. The warp and filling chains are built and operated independently, but both on the same cylinder. Intermediate eccentric gears are used for operating the harness and box motions, enabling the harness and shuttle-boxes to be started slowly and still leaving them

board vice I. T. Burdell. The building and canal are practically ready for the machinery and water-wheel.

THE Woodberry (Md.) Manufacturing Co. is putting a new Corliss engine in its cotton-duck mill.

A PARTY of New York capitalists contemplate building a cotton mill at Gadsden, Ala., and Mr. R. A. Mitchell, of the Gadsden Land Co., is in communication with them endeavoring to induce the location. The parties will likely visit Gadsden shortly to investigate.

A MILL to finish sheetings and shirtings is proposed at Shelby, N. C., and Mr. J. T. Gardner has charge of a subscription list which is now being circulated. A \$100,000 plant is contemplated, and this amount is to be secured by the instalment plan of paying fifty cents per share weekly.

THE past winter has been a highly satisfactory one for the sheep-raisers of Texas, and nearly all the flocks are in good condition. Around San Angelo shearing is now well under way, and it is estimated that the eight months' clip will average from four and a-half to five pounds to the fleece.

CONTRACT for erecting the buildings for the new Cherry Cotton Mills at Florence,

affairs are in fine condition, but a reorganization has been deemed advisable.

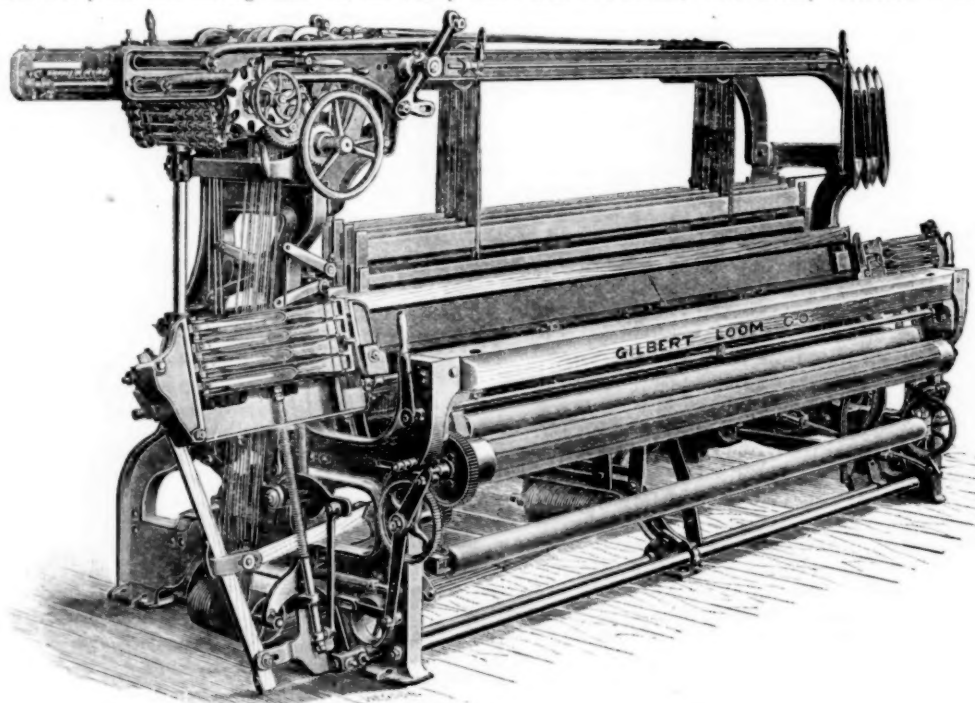
MR. T. S. WALKER, of Gonzales, Texas, is endeavoring to organize a cotton-mill company at that place. Mr. Walker has a valuable water-power site which he intends to utilize in supplying power for the plant.

MESSRS. S. A. SPENCER & Co., of Randleman, N. C., have about decided to engage in the manufacture of knit goods, and will put in at once twenty knitting machines.

MESSRS. R. S. PULLEN, I. S. Winn and W. J. Hawkins contemplate building a cotton factory at Raleigh, N. C., and are now endeavoring to arrange for its early erection. The probabilities are that the plant will be finished during the summer.

A WOOL-DRYING addition is now being built for the North Galveston (Texas) hosiery factory. The building is to be 40x60 feet and six stories high, and will also be used for an engine and boiler-room.

ANOTHER cotton factory is proposed for East Salisbury, N. C., by Messrs. F. J. Murdock, I. H. Foust and N. B. McCannlass. They are now soliciting subscriptions to a \$100,000 stock company, and have already succeeded in raising over



A NEW OPEN-SHED LOOM.

fully at rest during the flight of the shuttle, and imparting a very easy motion to the warps and a very steady motion to the shuttle-boxes. The shuttle-box-operating mechanism is through compound levers working directly from the racked jacks, the same as the harness. The shuttle-boxes are perfectly balanced, permitting their operation with the smallest amount of friction and power.

One or two warp beams can be used, and to them is applied the Linscott patent let-off, or any other motion preferred. The whip roll is supported on a heavy casting, so as to avoid any springing, and permits weaving the heaviest goods with ease and without any great strain on the loom, in which the ordinary roll is used. The take-up is conditional or positive, and in connection with it is used a winding-up roll which enables the weaver to remove the woven cloth while the loom is in motion and without any change in the number of picks.

Southern Textile Notes.

THE annual meeting of the stockholders of the Camden Cotton Mill at Camden, S. C., was held on the 13th inst. The same board of directors was elected except that J. E. Vaughn was made a member of the

Ala., has been let to S. E. Moore, of Philadelphia, Pa. Mr. Moore will commence work very shortly. The plant is expected to be ready for operation by September.

THE Stanley Creek (N. C.) Cotton Mill has let contract for a system of automatic sprinklers to be installed in its plant. Orders have also been placed with the Charlotte (N. C.) Machine Shop for a new boiler, 1248 spindles, 800 twister spindles and all necessary equipment for running them.

THE directors of the Newnan (Ga.) Cotton Mills held a meeting last week and a dividend of 7 per cent. was declared. For the year just ended the net earnings on the capital stock was 25 per cent. The stockholders held their annual meeting on Monday last.

THE Charlotte (N. C.) Cotton Mills will build a new weave shed and put in 150 looms for brown sheetings.

THE Kincaid Manufacturing Co., of Griffin, Ga., has declared an 8 per cent. dividend.

THE stockholders of the Reidsville (N. C.) Cotton Mills are to hold a meeting during the week for the purpose of reorganizing the company. The company's

\$25,000. The gentlemen will undoubtedly bring the project to a final success.

THE Sibley Manufacturing Co., of Augusta, Ga., manufacturers of sheetings, shirtings and yarns, has declared a semi-annual dividend of \$3.00 per share, payable May 1.

THE Centre Point (Ark.) Woolen Mills, a new concern, has commenced operations. Jeans will be produced.

ALSPAUGH BROS.' sheeting and yarn mill at Taylorsville, N. C., has been purchased by J. F. Moore, who will put it in operation at an early date.

PRELIMINARY work has commenced on the proposed extensive additions to the Riverside Cotton Mills at North Danville, Va.

THE Sibley Manufacturing Co., of Augusta, Ga., has declared a semi-annual dividend of \$3.00 per share.

SUBSCRIBERS to the stock of the Afro-Alabama Cotton Mill Co., of Anniston, Ala., to which a charter was recently granted, held a meeting last week for organization. The board of directors was elected, and they chose officers as follows: W. J. Stevens, president; James E. Bush, vice-president, and Chas. E. Thomas, secretary-treasurer.

MECHANICAL.

The Automatic Railway Pump.

The pump herewith illustrated is a new invention that is owned by the American Railway Water Co. and protected by several valuable patents. The prime object of this pump is to supply railroad tanks with water, though it may be used to advantage in many other places.

This pump is so constructed that when used for the purpose of supplying railroad tanks with water it dispenses with the stationary engine and all other devices that have been used in the past, and is operated simply by the train as it moves off

loop at the end of a steel-wire cable, as shown in the illustration, which is connected with the machinery that operates the pump. After taking water the train moves out from the tank, and that end of the cable is drawn a distance of 300 feet and is automatically released as the locomotive passes a throw-off or switch-post. By this process it is claimed that 3500 gallons of water will be placed in the storage tank, requiring less than one minute of time for the purpose, as the work is performed while the train is getting under headway.

There being a loop on each end of the cable, the other end is then in position and ready to be engaged by the next train going in either direction and drawn out as

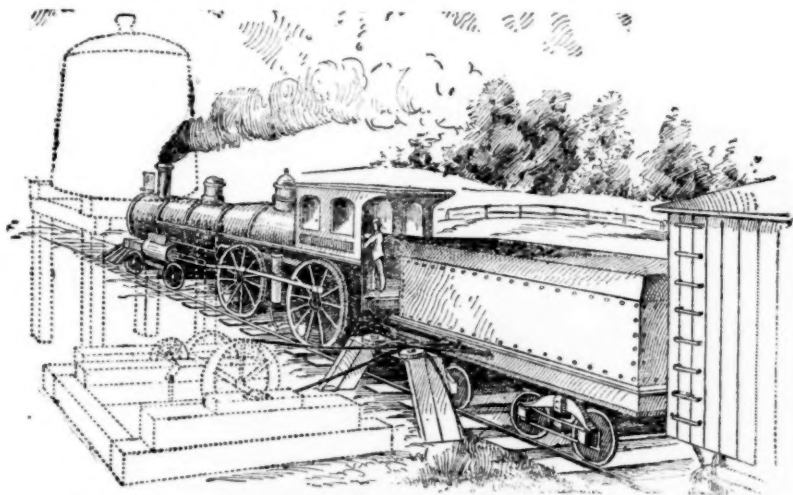
to relieve them entirely of that annoyance.

The company claims that this pump is more economical and can be used to better advantage in all sections of the country than any other machinery that has ever been introduced for similar purposes. It is strong and durable. The principle employed is simple, and the pump is said to be absolutely frost-proof, even in the coldest climates.

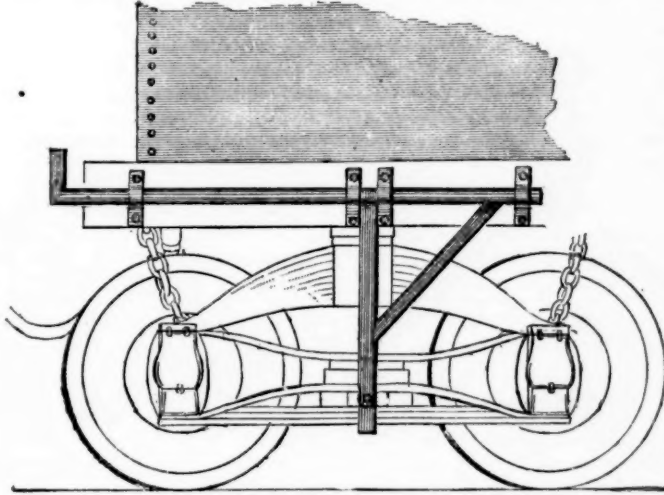
It has been estimated that the railroad water supply in the United States alone costs about \$12,000,000 annually. Of this amount the American Company urges that one-half could be saved to the railroads were this invention to go into general use. It is the intention of the company to

The Fort Worth (Tex.) Stockyards Co.

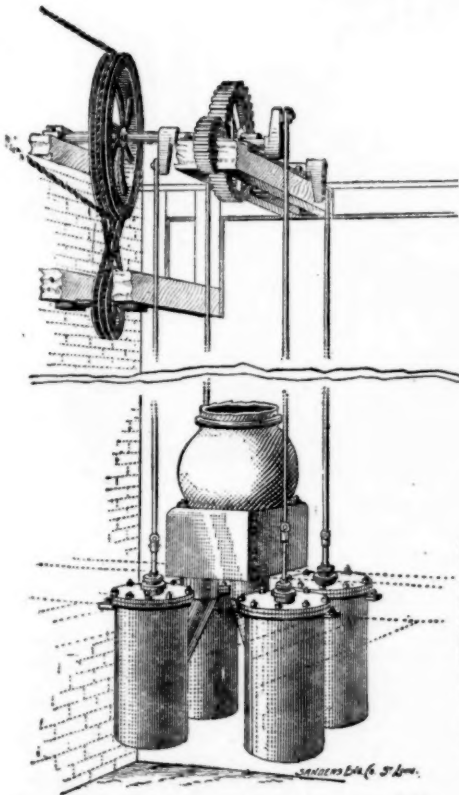
The new enterprise of the Fort Worth Stockyards Co., of Fort Worth, Texas, which will start up on or about May 1, it is said, will be conducted principally by Boston capitalists. Mr. G. W. Simpson, of Fort Worth, the prime mover in this deal, returned home last week and says that the capital stock will be \$2,000,000, with a par value of \$100 per share, the president of the company to reside in Boston, Mass. The bank will be known as the National Stockyard Bank of Fort Worth, the capital stock of which will be \$250,000. Mr. W. H. Tallent, of Fort Worth, will be the president. The other



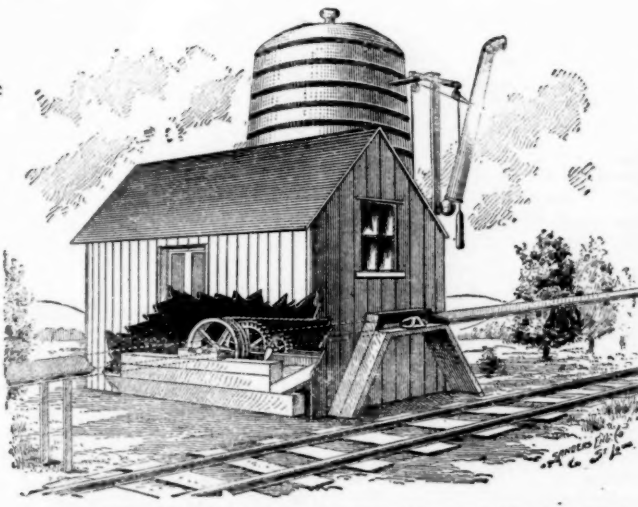
VIEW OF TRAIN WITH LEVER-ENGAGING CABLE-LOOP PREPARATORY TO OPERATING THE PUMP.



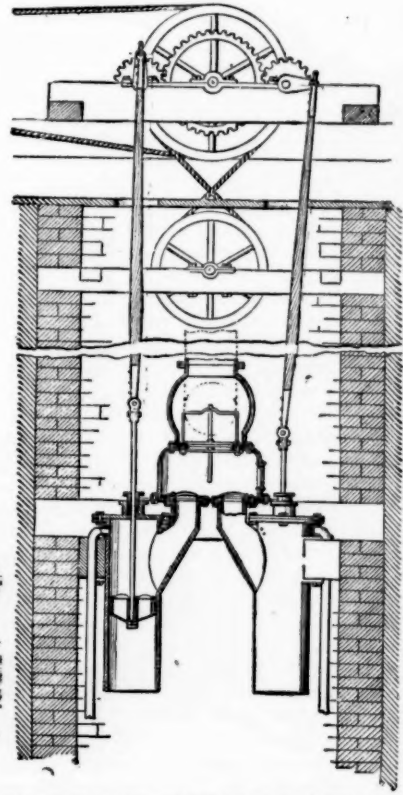
SECTIONAL VIEW OF TENDER WITH LEVER ATTACHED.



FULL VIEW OF PUMP AND MACHINERY IN OPERATION.



VIEW OF COMPLETE WATER STATION, WITH MACHINERY HOUSED AND IN EVERY WAY PROTECTED FROM FROST AND EXPOSURE.



SECTIONAL VIEW OF AUTOMATIC RAILWAY PUMP, CONSISTING OF FOUR 15-INCH CYLINDERS, 18-INCH STROKE.

after taking water in the usual manner. This takes no time, or, rather, the train loses no time in doing the work, since the water is raised while the train is getting under headway after having taken water. It can be operated economically, as the locomotive does not require an additional pound of steam, nor is there any help needed to manage or superintend the operation of the pumping machinery.

The power is transmitted from the locomotive by means of a steel-wire cable attached to the machinery. When the train stops for the purpose of taking water a small lever under the control of the engineer or fireman automatically engages a

before. By this method a full supply of water can always be kept in the storage tank, since each train will place in the tank more water than it takes out. It will only be necessary for freight trains that stop and take water to operate the pump, and it will not be necessary for passenger trains to operate the pump, since the freight trains will furnish an ample supply for both.

This is a new idea, and will be an innovation in the water service of the railroad world, but one that might revolutionize that service. It is said that railroad companies have more trouble on account of their water service than in any other branch of their business. This machine promises

equip railroads with these pumps, placing them on contract for a rental, after the manner of the telephone, the air-brake, etc.

In order to be in the railroad centres the company has opened offices for transacting business in St. Louis, Chicago and Memphis, and expect soon to have one in New York city. It is believed that this new system of water supply will not only be very popular with the railroads and be universally adopted by them, but that it will be a profitable business enterprise. It is stated that the company has the endorsement and patronage of leading railroads and business men. Its St. Louis office is located on fifth floor of the Equitable building,

gentlemen who are to take an interest in the new deal are Hon. J. N. Keith, Bourne, Texas; Charles Miller, Franklin, Pa.; W. E. Hawkes, Bennington, Vt.; J. T. W. Tilden and B. J. Tilden, Little Rock, Ark.; Woodward & White, New Orleans; H. C. Tillinghurst and J. L. Lombard, Chicago; M. C. Hurley, Fort Worth, Texas; Col. C. C. Slaughter, Dallas, Texas, and twenty Boston capitalists. Additional stockholders are from Philadelphia and Baltimore.

A PART of the Virginia exhibit at the Columbian Exposition will be a solid block of coal weighing 8000 pounds, to be sent by the Pocahontas Coal Co.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department, on pages 226 and 227.]

Lumber Directory.

Readers of the MANUFACTURERS' RECORD who may be in the market for lumber of any description are recommended to the directory of Southern lumber manufacturers and dealers which appears among the advertising pages.

Annual Meeting of the Texas Lumbermen's Association.

The seventh annual convention of the Lumbermen's Association of Texas met on the 10th inst. in the Tremont Opera-House, Galveston, Texas. The morning session commenced at 10 A. M., and as the trains were late arriving, the attendance, although a representative one, was not as large as expected. Mayor Fulton, of Galveston, made a very appropriate speech of welcome, giving the visiting millmen and lumbermen the freedom of the city while the convention held its sessions. President Gribble replied to Mayor Fulton, thanking him and the citizens of Galveston for their kindness. The president stated that the association throughout the State was in a prosperous condition, and much interest is being manifested in the growth and work of the organization. He then called upon Mr. Carl F. Drake, the secretary, who read his annual report. In presenting his report the secretary stated that he did so with some feeling of pride, as the association had outlived all its predecessors in the lumber field, and that today it was stronger, better and more prosperous than ever before. He asked the support of the members in the publication of the monthly organ of the association, and stated that its columns were at all times open for discussion on matters relating to the association and the lumber industry generally. The report closed with some remarks on the work of the several committees and recommended—first, that the present chairman of the committee on membership be retained and a careful selection be made of his assistants; second, that the committee on exchange building be discontinued unless some definite action be taken at this meeting; third, that a carefully selected committee on weights, rates and overcharges be selected, with instructions to organize at once for work; fourth, that a committee on insurance make special recommendations to this meeting, and that active work in this line be at once commenced; fifth, that the World's Fair committee be discontinued; sixth, that a committee on legislation be appointed, and also a committee on arbitration, with two chairmen, to consist of three members from the dealers and two from the manufacturers; seventh, that a finance committee of three be appointed as a reserve, and lastly, that each member pledge himself to increase the membership and contribute to the general welfare of the association.

The report of committee on membership was presented by Mr. T. C. Morgan, which was unanimously received and ordered filed. Among the most important reports of committees was that relating to rates, weights and overcharges. Mr. S. F. Carter, chairman, in his report said that the committee on rates, weights, etc., had accomplished but little during the year, as the question of State freight rates during most of the year was beyond the province of the committee, being under the exclusive jurisdiction of the Texas railroad committee. At the time the commission rates were withdrawn in September there was temporary confusion and some slight annoyance to shippers, owing to the readjustment of rates, but the railroad companies were not slow in correcting such inconsistencies as would naturally result in a rearrangement of a multiplicity of rates, and we now think

that the lumber rates of the State are on a more equitable basis as between manufacturers, dealers and consumers than when the commission rates were in force. While we would not object to seeing lower rates on this commodity all along the line, yet we consider the system that permits free competition in buying and selling in all parts of the State far more preferable and more beneficial to all interests than the policy that tends to restrict trade and prevents an even, symmetrical development of the material resources of the State. The committee recommended—first, should the Texas railroad commission be again vested with the power to make and enforce rates, that they be requested to exempt lumber from the application of their mileage theory, and adopt a system of rates that will give the remote manufacturer as well as the remote districts of consumption the benefit of healthy competition in this line; second, that the Texas legislature or proper tribunal be requested to require railroad companies to accept as final the weights of lumber as reported by the initial line, and that public lumber-weighers be provided for, should the railroad companies so desire; third, that the Texas legislature or proper tribunal be requested to make it the duty of the railroad companies to take lumber through from points of shipment to destination in the original car without transfer, except in case of having to transfer from narrow-gauge to broad-gauge cars or vice versa; fourth, that the lumber dealers be requested to protect the shipper as far as possible in matters of this kind by refusing to pay freight in case of overcharges in weight or freight, or apparent shortage or damage, until proper correction is made, or until he can receive from the shipper instructions in the premises. Mr. R. D. Gribble presented his report on united association, which was of a most elaborate and exhaustive character and was well received. An able address on the lumber question was made by Mr. William Cameron, and a committee appointed to take action on the report of the committee on rates, weights and overcharges. The convention then adjourned until Wednesday at 9.30 A. M.

The second session opened at 10.00 A. M. on Wednesday, when the committee on insurance reported and recommended the association to take steps at once toward the organization of a lumbermen's and milling insurance association. They also suggested that a committee of ten be appointed to receive subscriptions and inform themselves as to the law and necessary step in the important premises. Mr. Cameron said the question of insurance was an important matter to millmen. He also stated that if good stocks or bonds can be deposited in Austin for the guarantee fund of an insurance company he would deposit as his share \$50,000 or \$100,000. Mr. Rushing, of Baird, Texas, moved that the insurance report be received and made a special order of business for Thursday, and the committee be discharged. The temporary committee on rates, freights and overcharges reported and recommended the adoption of section 1 and the rejection of section 2, while they recommended the adoption of sections 3 and 4 as above mentioned. The association then voted on the recommendations of the committee, resulting in the adoption of their report. The committees on membership and finance presented their reports, after which the association adjourned until Thursday morning.

The convention was called to order at 10.15 on Thursday morning. The following resolution was offered by Mr. J. A. Bentley:

Resolved, That a committee of seven be appointed by the chair for the purpose of defining to what extent manufacturers can sell outside of dealers; that three members be selected by the millmen and four from the dealers, and that they submit their report to the convention, and if there

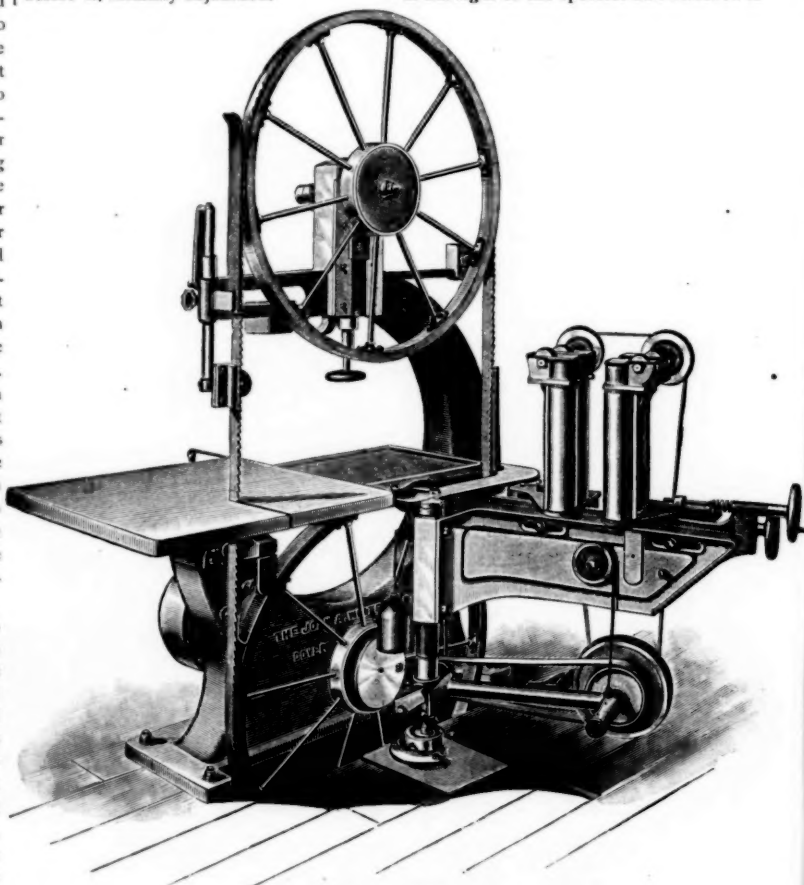
be any dissension, that they make majority and minority reports.

Carried, and the following committee appointed: Millmen—Bentley, Mallum and Ramsey; retailers—Owen, Whitesille, Lowe and Walker. A short discussion was entered into on financial matters relating to the association, after which the committee on nominations of officers for the ensuing year reported. Mr. J. C. Jones, the chairman of the committee, announced the nominees as follows: For president, R. D. Gribble; vice-president, George Locke; secretary and treasurer, Carl F. Drake; board of directors, A. T. Anderson, William Wiess, W. E. Ramsey, C. H. Moore, E. H. Lingo, Albert Steeres, W. H. Brazelton, F. A. Low, C. S. Woodworth and Robert Low. On motion of Mr. Rushing the above board of officers were unanimously elected. The place for holding the next convention was next considered, and after some discussion Dallas was selected as the place for the next meeting on the second Tuesday in April, 1894. The convention, having completed the business before it, formally adjourned.

A New Band Saw.

The machine shown in the accompanying illustration, designed and built by the John A. White Co., of Dover, N. H., comprises several novel features and will apparently be a popular tool among those desiring a specially heavy band saw of large capacity, either with or without provision for resawing. As a band saw it will handle stock eighteen inches thick, and has a clearance of forty-eight inches between saw and frame. The table may be tilted at any desired angle and is strongly ribbed for carrying heavy timbers, knees, etc., such as used in car, bridge or ship-building work.

The wheels are forty-eight inches in diameter, with taper-bored hubs, steel spokes, malleable iron shoes and rubber-covered ash rims, and will carry saws up to two inches wide. All the ordinary adjustments may be made while running, and ordinary tight and loose pulleys are replaced by a combined friction clutch and driving pulley operated by a small handle at the right of the operator and attached to



A NEW BAND SAW.

Meeting of Lumber Manufacturers in Nashville.

A called meeting of the lumber manufacturers and dealers of Nashville, Tenn., took place at the Merchants' Exchange in that city on the 12th inst. The meeting represented a majority of both branches of the lumber industry, but the discussions affected the manufacturers principally. The object of the meeting was to change the system of measuring dressed lumber from the "face" measurement to the "strip." The manufacturers and dealers present were unanimously in favor of the change. The chairman of the meeting, Mr. McCullough, appointed W. H. Hartwell, Charles Graves and John Moore to visit everyone in the business and get them to agree to the change. When this is effected an effort will be made to arrange a schedule of prices. The committee will report at a future meeting.

DURING last week the schooner D. D. Haskell, from Boston, was chartered by the Litcher & Moore Lumber Co. to take 325,000 feet of lumber to Tampico, Mexico.

the false table.

The resawing attachment is heavier and of more durable construction than in most apparatus of this character, and will saw to the centre of stock eight inches thick and up to eighteen inches wide. Unlike most combination resawing devices, it is not lifted bodily from the table or raised and lowered by rack and pinion, but swings easily in and out of place on a vertical axis. The cut shows it swung out of the way, leaving a band saw with forty-eight inches clear between saw and frame. The feed-driving mechanism is automatically connected when the device is swung into place, and a separate lever is provided by which the rolls may be instantly started or stopped.

The friction feed is of an entirely new form, absolutely positive in action, and may be varied as desired between ten and thirty feet per minute by the turning of a hand-screw. The rolls are four in number, all geared, and are provided with compensation springs to allow for inequalities of stock. The right-hand pair may be clamped, however, if desired at any

THE Cape Fear Lumber Co., chartered under Virginia laws, intends to build at Wilmington, N. C., a mill to saw about 75,000 feet of North Carolina pine daily; dry-kilns sufficient to dry same will also be erected. The concern has a capital stock of \$200,000 and the following officers: S. Q. Collins, president; L. T. Gwathmey, secretary and treasurer, and W. W. Robertson, general manager.

North Carolina Pine Association is strictly adhered to, and at the present figures the product is moving lively. Values being very firm under the present active demand, there may be a further advance reported in the near future. There are a number of vessels in port awaiting cargoes, and with the shipments by rail stocks are becoming somewhat depleted. The planing mills report a good trade, and all are running on full time, orders being executed at fair prices. There is a fair movement in air-dried pine boards, but receipts continue light, and sales are made promptly at outside quotations. In cypress lumber shingles there is a moderate demand, and prices about steady, with stocks ample.

Kiln-dried North Carolina pine lumber f. o. b. vessel at this port is quoted as follows:

5-4 rift No. 1.....	\$27 50/60	—
5-4 rift No. 2.....	16 00/60	—
5-4X10 No. 1.....	20 00/60	—
5-4X12 No. 1.....	20 50/60	—
5-4X10 No. 2.....	15 00/60	—
5-4X12 No. 2.....	16 00/60	—
5-4 edge No. 1.....	17 50/60	—
5-4 edge No. 2.....	13 50/60	—
4-4 rift No. 1.....	25 00/60	—
4-4 rift No. 2.....	15 00/60	—
4-4X10 No. 1.....	18 50/60	—
4-4X12 No. 1.....	19 50/60	—
4-4X10 No. 2.....	15 00/60	—
4-4X12 No. 2.....	15 00/60	—
4-4 edge No. 3.....	9 50/60	—
5-4 edge No. 3.....	10 50/60	—
4-4X8, 10 and 12 culls or box.....	9 00/60	10 50
4-4X5-4 edge, cull or box.....	8 50/60	—

In carload lots \$1.00 additional per thousand on Nos. 1 and 2, and fifty cents additional per thousand on No. 3 and box.

Charleston.

[From our own Correspondent.]

CHARLESTON, S. C., April 17.

The lumber and timber market presents a more active tone than usual, and there is a good demand from Northern ports for all desirable grades of lumber. The mills at this and all adjacent points are fully occupied and have numerous orders to execute. Prices are unchanged and are generally firm under the active demand existing at the moment. The following shipments of lumber are reported for the week: Per steamer to New York 190,000 feet, and by the schooner Cora H. Hanson 410,000 feet; schooner Genevieve, 456,000 feet; schooner Bessie Whiting, 430,000 feet, and schooner H. & G. Blenderman, 425,000 feet. The schooner Anna E. Ketcham took out 280,000 cross-ties for Boston. Coastwise freights on yellow-pine lumber have advanced here as well as at other Southern ports, and shippers are offering higher rates. The demand for vessels both here and at Georgetown is more urgent, and vessels are wanted to take cross-ties, parties being willing to pay an advance to secure them.

EXPORTS OF LUMBER FROM CHARLESTON FROM SEPTEMBER 1, 1892, TO APRIL 14, 1893.

Exported to	1892-'93. Feet.	1891-'92. Feet.
New York.....	24,525,931	19,945,867
Boston.....	918,000	—
Philadelphia.....	2,744,292	4,584,000
Baltimore.....	840,000	753,278
Other United States ports	1,009,000	1,581,000
Total coastwise.....	30,037,223	26,864,845
Great Britain.....	—	—
Palermo.....	—	—
France.....	—	—
West Indies.....	1,660,360	1,952,300
South America.....	—	177,000
Nova Scotia.....	—	—
Other foreign ports.....	—	578,174
Total foreign.....	1,660,360	2,717,474
Grand total.....	31,697,583	29,582,319

Savannah.

[From our own Correspondent.]

SAVANNAH, GA., April 19.

The outlook at this port and throughout the adjacent milling sections of the State is considered very favorable for the lumber industry, and most of the mills are supplied with orders. There is a good demand from Northern ports for desirable grades of manufactured lumber, and prices hold very firm. During the past week there has been considerable along the wharves and docks, and a number of vessels are now awaiting cargoes. There is a good foreign demand at the moment. The coastwise exports of lumber for the

week were 1,016,000 feet for New York, 490,000 for Portland, Me., 418,192 for Baltimore and 46,000 for Boston. Other shipments consisted of 13,414 cross-ties, 170,000 shingles, fifty-eight cases of cedar and 266 cedar logs. The list of prices is very firm, and the better dimensions are scarce. Easy sizes are quoted \$11.50 to \$13.00; ordinary sizes, \$12.00 to \$16.50; difficult sizes, \$14.00 to \$25.00; flooring boards, \$14.50 to \$22.00, and shipstuffs, \$15.50 to \$25.00. In freights there is a better feeling, and vessels for coastwise business are in good demand, while rates have stiffened materially. The rates from this and nearby Georgia ports are quoted at \$4.62½ to \$5.50 for a range including Baltimore and Portland, Me. To New York steamer rates are unchanged at \$7.00, to Boston \$8.00 and Baltimore \$5.50.

Pensacola.

[From our own Correspondent.]

PENSACOLA, FLA., April 15.

The timber market has ruled quiet during the week, and stocks are fully ample for the demand, although the exports have been heavy, about 5,000,000 feet having been shipped. The price for sawn timber has been eleven and one-quarter to eleven and one-half cents, according to quality and average. There has been an active movement in lumber, and the demand from South America is quite spirited, about 1,500,000 feet having been shipped to Rio Janeiro. Foreign exports generally have been fair, and the demand from domestic ports is improving. The total exports for the week aggregate about 8,000,000 feet of lumber and timber. The shingle trade is improving, and prices are very steady, with a fair supply. The market for pitch-pine freights is steady and unchanged. The quotations are \$4 5s. to \$4 7s. 6d. for large tonnage to United Kingdom or Continent and \$4 10s. to \$4 12s. 6d. for smaller tonnage. Rates to the River Plate are \$12.00 to Buenos Ayres and \$14.00 to \$14.50 for Rio Janeiro.

Mobile.

[From our own Correspondent.]

MOBILE, ALA., April 17.

The lumber and timber market has been fairly active during the week, and while the volume of business is not excessive, there is a very encouraging outlook in this industry. Hewn timber has been in fair demand, and the foreign exports for the week aggregated 174,286 cubic feet, and since September 1, 1892, the exports have been 1,753,364 cubic feet, against 1,355,767 cubic feet for the corresponding period in 1891-'92. The market for hewn timber may be called dull in the face of the above shipments, and prices are about steady at eleven and a-half to twelve and a-half cents per cubic foot for 100-foot average and classing B1 good. Sawn timber is dull at eleven and three-quarters to twelve cents per cubic foot, basis of 40-foot average, and the shipments during the week aggregate 68,511 cubic feet, all foreign. The shipments since September 1, 1892, amount to 1,547,423 cubic feet. There is a very fair demand for lumber from European markets, and prices are firm for all desirable grades. The shipments for the week were 1,763,931 superficial feet, and since the first of September, 1892, they amount to 50,828,268 feet, against 38,179,472 feet for the corresponding period in 1891-'92. There is a good demand for lumber for local building purposes, and the improvements projected in this city will require large quantities during the current year. Hewn oak timber is in good request and firm at seventeen to twenty cents per foot. Cypress timber is scarce, and the late freshet has not brought to market the quantity expected, and cypress logs are firmly held at twelve cents per cubic foot. Owing to the scarcity of cypress shingles mills are not getting the quantity they require, and there is a prob-

ability that the lumber cut of cypress will be curtailed to give shingle cutters a chance.

New Orleans.

[From our own Correspondent.]

NEW ORLEANS, LA., April 14.

The movement in lumber and timber so far during the month has been very satisfactory, and it is likely that the volume of business for the current month will be larger than usual. There is an increased demand for lumber and timber for local building purposes, and the improvements projected in the city and around the suburbs will call for a larger quantity than for some years past. The receipts by rail are also very large and show a considerable increase. Numerous saw mills and wood-working factories are being erected at towns along the various lines of railroad entering this city, and Northern capitalists are investing heavily in timber lands throughout this State and Mississippi. G. A. & W. W. Logue, of this city, who are largely engaged in the lumber industry, contemplate erecting a saw mill on the line of the Illinois Central or Northeastern Railroad which is to contain the latest and most approved machinery, including a shingle and lath machine and a dry-kiln. The business in cypress is attaining large proportions, and the market for this wood is active, with a good demand and prices firm. The Fischer Lumber Co., of this city, received last week from their cypress swamps on Big Black river one of the largest tows of choice cypress timber this season, aggregating about 2,000,000 feet. This firm has just closed a contract with the Electric Traction Co. of New Orleans for all their lines and extensions. The amount required will be about 4,000,000 feet. There is considerable activity among the planing mills here, and all the sash, door and blind factories have all the orders they can handle for some weeks to come. At all points on the lake there is a very good business in progress, and at Pascagoula, Miss., the exports for one week were 2,634,948 feet of lumber, divided as follows: Havana 1,327,509 feet, Buenos Ayres 606,658 feet, Mantanzas 250,180 feet, Belize 33,000 feet, Antigua 239,760 feet, Laguna 90,000 feet and Gweek 87,841 feet.

Beaumont.

BEAUMONT, TEXAS, April 15.

There has been rather a quiet tone to the lumber market during the week, and a large number of representative millmen and manufacturers have been in attendance at the State lumber convention in Galveston. The business proper has not suffered in their absence, and the general market is quiet but firm under the existing demand. The Beaumont Journal says: "The market, however, maintains its stiffness, and sales are made strictly on list prices. Orders come in with reasonable regularity from points outside the State. Saw bills are in good supply, the price of timbers remaining substantially unchanged." This city was well represented at the lumbermen's convention, and nearly all the delegates returned home yesterday morning and expressed themselves as well satisfied with the work of the convention. A very prominent and exhaustive article by Mr. Robert E. Kelly on the lumber resources of Texas has been published, and is considered one of great merit, and, in fact, the only really authentic statistical record of this period. At Orange and Lake Charles, La., and in fact throughout all this section, there is a rapid development in progress, and the lumber industry as now conducted bids fair to rival that of any other State. Some of the milling firms in this section own more than 200,000 acres of pine lands, and with the system now adopted these companies know the exact worth in lumber of every acre. Leading lumber operators are now conducting business on a uniform system,

which knowledge has been gained by long experience, and the various organizations among operators tend to elevate and strengthen the general market.

Iron Market Review.

During the past week, while there have been no changes in prices of iron, the market has assumed a more encouraging tone in almost every quarter. While this is particularly noticeable in Bessemer pig and steel, the same holds for foundry and mill pig, giving a brighter outlook than for some time past. Prices hold steady at all points, with few concessions offered in any but exceptional sales. The general feeling is that unless labor troubles interfere, the time is not far distant when there will be an advance in prices. Stocks now on hand represent only about three weeks' supply of iron, and if consumers get an idea that there is to be a rise heavy purchases will likely follow and with them the price will advance. From a purely statistical point of view these conditions are almost inevitable, and apart from this the actual condition of trade warrants the belief that such might be the case.

In Cincinnati there has been a fairly good tone to the market for some weeks, and this is being strengthened by the steady run of medium-sized orders, with an occasional sprinkling of large ones for future delivery. Southern No. 1 soft, No. 2 foundry and silver gray are scarce and in good demand. Quotations are for cash f. o. b. Cincinnati: Southern coke, No. 1 foundry, \$13.25 to \$13.50; No. 2 and No. 1 soft, \$12.00 to \$12.25; gray forge, \$11.00 to \$11.25; mottled, \$10.75 to \$11.00.

The Louisville market has shown less change in tone than any of the others. The amount of buying has been fair, but prices were low, and in many instances concessions have been made. During the latter part of this week the general feeling strengthened a little, and the indications are that the coming week will be a better one, though no material change in prices is expected. Quotations are for cash f. o. b. Louisville: Southern coke, No. 1 foundry, \$12.50 to \$13.00; No. 2 foundry, \$11.25 to \$11.75; No. 3 foundry, \$10.50 to \$11.00; gray forge, \$10.25 to \$10.75.

In Chicago the market was thrown a little off by what appeared to be authentic rumors of labor disturbances, but after these were shown to have no foundation, for the present, at least, buying became better, and has held up, while inquiries have been numerous. Prices have not changed, but an advance in the near future is apparently apprehended by some of the larger consumers. Quotations are, cash f. o. b. Chicago: Southern coke, No. 2 foundry, \$13.00 to \$13.50; No. 1 soft, \$13.00 to \$13.35; No. 2 soft, \$12.75 to \$13.00.

St. Louis consumers are coming into the market with both orders and inquiries, and consequently trade looks better. Some of the largest consumers have nearly exhausted heavy stocks which they have been carrying, and before long will have to buy. The general feeling is one of confidence. Prices remain as before, though there is now little or no shading. Quotations are, cash f. o. b. St. Louis: Southern coke, No. 1 foundry, \$13.50 to \$14.00; No. 2 foundry, \$12.25 to \$12.50; No. 3 foundry, \$11.75 to \$12.00; gray forge, \$11.25 to \$11.50.

In the Eastern markets there is not much change in Buffalo, Boston or New York, but in Philadelphia a steadily increasing demand is apparent, particularly for No. 1 and No. 2 soft irons. As yet there is no change in prices, but some advance before long will not be unexpected.

Southern Iron Notes.

ARRANGEMENTS have been practically completed for continuing the erection of the furnace at Piedmont, Ala. The work will be pushed forward as rapidly as possi-

ble. The arrangement includes the financing of the furnace company to insure operations as soon as the plant may be completed.

THE Elmore Iron Works, of Birmingham, Ala., has secured the contract for building additional stoves for the Woodward furnaces at Wheeling, Ala.

THE stockholders of the Buena Vista (Va.) Iron Co. held a meeting in Philadelphia recently, and the concern was reorganized by the election of L. M. Bullitt as president and George L. Estabrook as secretary. Another meeting will be held shortly to consider future operations.

THE Roanoke (Va.) Machine Works will go into operation again in a few weeks as the result of an order from the Norfolk & Western Railroad for twelve consolidated freight engines, three shifting engines, thirty cabin cars and two wrecking cars. This order amounts to about \$185,000.

AT a test of car axles, made by the United States Car Co. at its Anniston (Ala.) plant last week, they withstood three blows from a 1640-pound hammer at ten feet, two at fifteen feet and one at twenty feet. The tests were made for the Minneapolis, St. Paul & Sault Ste. Marie Railway, Mr. E. A. Williams, their master machinist being present, and he stated that the test was a most remarkable one. The railway will likely give the works a large order on account of this report.

THE Victoria furnace, near Lexington, Va., will go into blast shortly. It has been shut down several months for repairs, and these are now nearing completion.

IN the chancery court at Chattanooga on last Monday J. D. Roberts was appointed receiver of the Lookout Iron Co. on application of the Harriman Manufacturing Co. and the East Tennessee Land Co. Bond was fixed at \$50,000. The company is alleged by the bill to be involved to the extent of over \$135,000, and an injunction has been issued to restrain it from selling any of its property.

IT has been stated that the Pulaski Knitting Mills were about to be removed from Savannah, Ga., but the latest advices are that they will remain. Mr. William Brewster, the new superintendent, will arrive in Savannah this week, and arrangements for resuming operations on an extensive scale will be commenced at once. All the necessary capital to carry the enterprise through to a complete success has been subscribed.

THE citizens of Hampton, S. C., are making an effort to erect a cotton factory, and Col. M. B. McSweeney and Mr. W. F. Cumings, the president of the bank of Hampton, succeeded last week in raising a subscription of \$32,000, and it is said that the factory will be erected in time to utilize a portion of the growing crop. A committee of prominent citizens will visit Charleston in order to obtain further subscriptions to the stock.

THE Arkadelphia (Ark.) Cotton Mills' directors held a meeting last week at which Mr. L. E. Gibney was present and made an offer of \$20,000 in cash for the entire property of the company. The proposition was accepted, and Mr. Gibney will at once proceed to reorganize the company and put the plant in operation at its full capacity in a few weeks. Provision for the manufacturing of twines and yarns will be made especially.

A COMMISSION to organize has been issued to the Cheraw (S. C.) Cotton Mills, with H. W. Finlayson, R. T. Caston, H. P. Duvall, W. R. Brantly and others as incorporators. The capital stock is to be \$50,000, and books for subscription to same have been opened by Mr. Finlayson. Payments for subscriptions will be made on the popular installment basis. The success of the company is no doubt assured.

COTTON MARKET.

NEW ORLEANS, LA., April 17.

Editor Manufacturers' Record:

The trouble with the cotton market is that the spinner does not want cotton at present or prospectively, and neither does the investor or the speculator. There are no buyers of contracts sufficient to sustain prices, and, when we come to think of it, what advanced the market last fall and sustained it was speculation, because there has never been this year, except spasmodically, a continued and active spot demand to sustain the market permanently at any time without the assistance of futures. In other words, the buyers of futures put up prices then, and not a demand for the thing itself. The trouble with the future market is that the long interest has been purely a speculative one for some time past, while the short interest has been largely represented by actual cotton, and consequently the latter has not taken alarm. A man long of contracts does not stop to consider whether the month he has bought in is at a large discount compared with spots or not; he merely considers either that he has lost all the money that he cares to lose, or that he cannot hold his interest any longer, owing to inability to protect against further declines. Liverpool cables us today they fear the situation in America, and, this being the case, nothing has happened in America today to make the situation any better there tomorrow. Ordinarily there are reactions from declines, but such improvements come about and become permanent or otherwise according to the strength or weakness of spots; and in the majority of cases spots sympathize with such efforts to advance contracts, but the present situation is one that indicates no outlook for a spot demand in the near future, and it therefore does not encourage the buying of futures either to cover shorts or otherwise, and hence sellers become more numerous than buyers, with the usual results. There seems only one thing to force the spinner into the market, and that is, an alarm about the next crop, but up to the present time no permanent injury seems to have been sustained, as the dry weather in Texas and elsewhere became a thing of the past on Friday and Saturday last, owing to general rains all through the Southwest. Frost was expected on Sunday morning, and, in fact, predicted by the government weather bureau, but no harm can have resulted of any moment by reason of that. Frost is also predicted by the government for tonight in the Carolinas and Georgia, but it hardly seems probable that much, if any, injury will result therefrom. The world's visible supply on Saturday last compared with the Saturday previous showed 45,000 less, and the total stock of American was 3,400,000 in round figures. It is this enormous supply that makes everyone timid about the present, because whatever the coming crop may give, whether it is 6,000,000 or 8,000,000, is not a matter of importance just now, so long as there is an enormous stock the world over which the consumer apparently does not want. A lower market seems to be more than probable, and there is no prospect of a revival until a spot demand becomes sufficiently active and continuous to arrest the decline.

ATWOOD VIOLETT & CO.

CLOSING PRICES OF COTTON FUTURES.

Months.	New Orleans. April 19.	New York. April 19.	Liverpool. April 19.
April.....	7.28	7.55	4 17-64
May.....	7.30	7.57	4 18-64
June.....	7.38	7.66	4 19-64 sel.
July.....	7.46	7.72	4 20-64 sel.
August.....	7.52	7.79	4 20-64
September.....	7.54	7.81	4 21-64
October.....	7.56	7.83	4 22-64 val.
November.....	7.59	7.87	4 22-64
December.....	7.62	7.92	.....
January.....	.....	7.99	.....
Tone of market.	Steady.	Steady.	Barely steady.

CLOSING PRICES OF SPOT COTTON.

Grade.	New Orleans. April 19.	New York. April 19.	Liverpool. April 19.
Middling.....	7 9-16	7 15-16	4 7-16
Low middling....	7 7-16	7 13-16	4 5-16
Good ordinary....	6 15-16	6 13-16	4 3-16
Tone of market.	Steady.	Dull.	Good demand.

Cumberland Coal Shipments.

The shipments of coal from the Cumberland region for the week ended April 15 and for the year to that date have been as follows:

Companies.	Week. Tons.	Year. Tons.
Borden Mining Co.....	6,351.19	88,658.16
Consolidation Coal Co....	18,817.02	247,512.04
Union Mine.....	3,974.08	54,068.00
George's Creek Coal & Iron Co.....	7,499.13	104,301.11
Swanton Mining Co.....	.....	.....
Potomac Coal Co.....	1,891.17	34,927.02
Franklin Cons. Coal Co....	1,847.13	22,439.12
Piedmont Cumb. Coal Co....	353.02	9,420.17
Barton & George's Creek Valley Coal Co.....	3,965.12	58,186.01
Big Vein Coal Co.....	1,448.02	17,433.12
Anthony Mining Co.....	156.07	3,404.05
W. V. C. & P. (Elk Garden Mines).....	7,404.06	93,238.08
Atlantic & George's Crk' Coal Co.....	686.13	13,140.07
Davis Coal & Coke Co....	1,349.00	22,897.00
Thomas Mine.....	1,977.03	29,603.10
Davis and Elkin Mine....	1,889.06	26,244.01
Cumb. Coal Co. (Douglas Mine).....	941.00	13,948.00
Elk Garden Big Vein Mining Co.....	971.03	5,614.00
Hampshire Mine.....	999.15	15,211.03
Big Vein Coal Co.....	.....	573.00
American Coal Co.....	9,483.15	95,299.13
Maryland Coal Co.....	7,256.10	69,760.01
New Central Coal Co.....	4,812.17	51,134.08
Total.....	84,107.03	.....
Previously.....	992,798.14	.....
Aggregate.....	1,076,905.17	1,076,905.17

COKE SHIPMENTS OVER WEST VIRGINIA CENTRAL & PITTSBURG RAILWAY.

Companies.	Week. Tons.	Year. Tons.
Davis Coal & Coke Co....	1,032.00	18,233.00
Thomas Coke Ovens.....	178.09	3,517.05
Cumberland Coal Co.....	356.00	5,367.00
Total for week.....	1,566.09	.....
Previously for year.....	25,490.15	.....
Year to date.....	27,057.04	27,057.04
Same period last year.....	.....	19,514.04

Coal and Coke Notes.

THE exports of coal from the port of Norfolk, Va., for the week ending April 13 were 42,726 tons, of which 3240 tons was foreign and 39,486 tons coastwise. The total exports from January 1, 1893, to April 13 were 459,143½ tons.

T. H. ALDRICH, the newly-elected general manager of the Suwanee Coal & Iron Co., is a staunch believer in the possibilities of the Gulf trade for the coal of Alabama. Already, he says, the Cahaba mines ship nearly 20 per cent. of their output to Gulf ports and South American countries.

THE Flat-Top Coal & Coke Association held its annual meeting at Norfolk, Va., on April 18. Eighty operators were present, representing about \$10,000,000 invested in coal property. The president is John Cooper, of the Mill Creek mines, and secretary and treasurer, Frank Herman, of the Turkey Gap colliery. A conference was held with F. J. Kimball, president, and Mr. Bullett, vice-president, of the Norfolk & Western Railroad, and with D. H. Mason, acting president of the Pocahontas Coal Co. Agreements were entered into regarding the output, transportation and disposal of coal and coke from the Flat-Top region. It is estimated that about 5,000,000 tons will be mined during the coming year.

A NINE-FOOT vein of coal has been found near Dover, Ark.

It is reported that the Fuente coal-mining property near Eagle Pass, Texas, has been sold to Mr. C. P. Huntington, of New York. The property embraces 20,000 acres of land, estimated to contain 100,000,000 tons of coal.

TRADE NOTES.

THE Richmond Locomotive Works, Richmond, Va., has orders on hand for thirty-four railroad locomotives.

THE American Bridge Co., of Roanoke, Va., has been awarded the contract for the construction of a bridge at Radford, Va., to cost \$25,000.

G. COLDEWEK & CO., 827 Sixth street, Milwaukee, Wis., manufacture a brick mold which has gained a national reputation among clay-workers through genuine merit.

THE list of sales made by the Gordon Hollow-Blast Grate Co., of Greenville, Mich., during March include thirteen towns in Michigan, three in Ohio and four in other States.

W. L. LEE & CO., Chicago, dealers in new and second-hand machinery, have large warehouses at 273 S. Canal street filled with tools of all makes and at all prices, or if an exchange is desired, a trade is easily arranged.

THE Atlantic Improvement Co., of Long Island City, Long Island, N. Y., has placed the contract for its new power station, consisting of an engine and boiler-house and dynamo-room, with the Berlin Iron Bridge Co., of East Berlin, Conn.

C. T. CUMMINGS, 374 W. Indiana street, Chicago, a practical and experienced builder of laundry machinery, is now located at the above address with a plant of his own. He carries second-hand machinery in stock, and will repair or make any desired improvements to suit the purchaser.

GEORGE OBERNE & CO., of 401 N. Halstead street, Chicago, manufacturers of belting, have found a rapidly extending trade for their goods in the South. The management of the company is under the direct supervision of Mr. Oberne, whose familiarity with the trade is the result of many years experience.

A RECENT shipment of three McNaull universal radial drills made by the McNaull Machine & Foundry Co., Ronceverte, W. Va., included one for Scotland. Other late orders embraced a boiler and engine for Hunter & Dixon, White Sulphur Springs, W. Va., and a fifty horse-power return flue boiler for J. C. Bright, Alderson, W. Va.

THE Vilter Manufacturing Co., of Milwaukee, Wis., has recently closed contract with Oscar F. Mayer & Bro., packers, of Chicago, for a twenty-ton refrigerating machine plant, with Corliss engine and the cellar piping; with B. A. Kipp & Co., of North Milwaukee, Wis., for a 20x42 Corliss engine with two boilers, and with Cadahy Bros., of Cadahy, Wis., for a 10x30 engine.

THE United States Aerophor & Air Moistening Co., of Providence, R. I., has lately placed several orders among Southern mills. The Pioneer Worsted Co., of Louisville, Ky., has equipped its spinning-room with the Aerophor system of air moistening; the Hope Mills Manufacturing Co., of Hope Mills, N. C., has also made contract for this system for its entire plant.

JESSE LUKENS, of the firm of Jesse Lukens & Bros., Philadelphia has withdrawn from the firm. The business will be continued at 620 North Delaware avenue by E. C. and S. C. Lukens under the firm name of Lukens Bros. Mr. Jesse Lukens has associated with him H. J. Clarke and opened a lumber-yard at Sixth street and Glenwood avenue, Philadelphia, under the firm name of Jesse Lukens & Co.

THE Progress Machine Works, of Meridian, Miss., report boiler-shop orders two months behind, with general trade very good and the outlook excellent. This company has just sent a carload of cotton presses to the Memphis Gin and Machine Works, Memphis, Tenn., and is filling an order for three carloads to Ben F. Wolfe & Co., of Dallas, Texas, as rapidly as the work can be turned out.

AN opportunity to secure a well-arranged manufacturing plant suitable for almost any kind of enterprise, particularly so for a furniture factory, carriage or wagon works or machine shop, is offered by the Lowmes Manufacturing Co., of Huntsville, Ala. It includes one and a-half acres of enclosed ground provided with railroad facilities and new brick buildings. The property may be purchased or rented.

THE Ahrens & Ott Manufacturing Co., of Louisville, Ky., is building a four-story brick addition to its brass works 100 feet long by fifty feet wide, doubling the capacity of the plant and giving employment to about 150 men in this department, making the total force of employees over 400. The iron works of the plant is also being extended by an addition 100 by 170 feet, which will increase the capacity of this department to three carloads per day. This company has a large trade, extending west as far as San Francisco and Portland, Ore., and east to Pittsburg and New York.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

* Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

† In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Anniston—Iron Foundry.—The Hercules Foundry Co., of Pell City, will remove its entire plant to Anniston and double its capacity.

Athens—Development Company.—The Southern Mining & Development Co. has been incorporated to deal in lands, etc., with a capital of \$10,000,000, 20 per cent. of which is paid in. James F. Dalrymple, of Seneca Falls, N. Y., is president; Archibald C. Harte, of Catawba, Pa., vice-president, and W. L. Ament, of Seneca Falls, secretary.

Bridgeport—Saw Mill.—Benjamin Wallace has lately built a saw mill.

Bridgeport—Woodenware Factory.—The Bridgeport Woodenware Manufacturing Co. will put a new engine in its factory.

Gadsden—Pipe Works.—The Gadsden Pipe Works will make improvements to double their capacity.

ARKANSAS.

Bard—Shingle Company.—Claiborne Watkins, W. F. Wright and A. H. Stebbins have incorporated the Bard Shingle Co. with a capital stock of \$50,000.

Eureka Springs—Machine Shops.—The Eureka Springs Railway Co. is building a repair shop and car sheds.

Little Rock—Real Estate Company.—The George Tilles Real Estate Co. has been incorporated by George Tilles, E. A. Linn and Mattie Blakeny with a capital stock of \$275,000, of which \$35,000 is paid in.

Prescott—Lumber Company.—The Iron Mountain Lumber Co. has been incorporated with W. S. Harrington, president; W. N. Bernis, vice-president, and E. E. White, secretary and treasurer. The capital stock is \$50,000.

FLORIDA.

Fairbanks—Canning Factory.—The establishment of a canning factory, moss mill and cotton gin is talked of.

Luraville—Phosphate Mines and Works.—P. A. McIntosh, J. W. Jones, Charles B. Parsons and others have incorporated the Luraville Phosphate Co. to open phosphate mines and erect phosphate plant. The capital stock is \$100,000.

Marietta—Phosphate Works.—The Marietta Phosphate Works, reported in this issue as burned, will be rebuilt.

Ocala—Lime Works.—H. Meiswinkle will start the Oakhurst Lime Works.

Tampa—Cigar Factory.—Herman Smeal, Hugh C. Macfarlane, Geo. R. Macfarlane, A. F. Lindcamp and W. B. K. Pettingill have incorporated the Armina Cigar Co. to establish a factory for the manufacture of cigars. The capital stock is \$25,000.

GEORGIA.

Atlanta—Land Company.—Application has been filed for charter for the Central Georgia Land Development Co. with a capital stock of \$500,000, of which \$60,000 has been paid in.

Augusta—Canning Factory.—A \$10,000 stock company has been organized to erect a canning factory.

Hogansville—Electric-light Plant and Water Works.—T. C. Lane, Frank Wood and R. W. Trimble have incorporated the Hogansville Water Works & Electric Light Co. to build and operate electric-light and water-works systems. The capital stock is \$25,000.

Nullin—Rice Mill.—W. N. Knight, of Kite, contemplates building a rice mill in Nullin.

Nullin—Soda-water Factory.—H. D. Smith contemplates building a soda-water factory.

Savannah—Rubber Manufacturing.—The Elastic Product Co. has been incorporated to manufacture cottonseed oil, rubber, etc. Thos. Appleton, Charles H. Fiske, George Fiske, Brewton H. Dickson and E. R. Hastings are the incorporators; capital stock \$25,000.

Tennville—Cottonseed-oil Mill.—H. H. Davis will build a cottonseed-oil mill.*

Toccoa—Canning Factory.—A canning factory will be erected.

Town—Canning Factory.—The Telfair & Montgomery Canning Co. will erect a canning factory. M. N. McRae, C. M. Tillman and M. McRae compose the company.

KENTUCKY.

Burgin—Distillery.—Dowling Bros. will rebuild their distillery reported in this issue as burned.

Louisville—Mantel Works.—The Hegan Manufacturing Co. will rebuild its mantel works reported in this issue as burned.

Newport—Electric-light Plant.—The Thomson-Houston Electric Light Co. intends to erect an electric-light plant.

LOUISIANA.

Lake Charles—Sugar Factory.—The Teche Railroad & Sugar Co. has been organized to build railroad and erect central sugar factory; capital stock \$1,000,000; Bradford Knapp, secretary.

Moseby's Bluff P. O.—Saw Mill.—S. L. Homes will put in saw mill and planer.

New Orleans—Brick and Tile Works.—The Hydraulic Brick Co., Limited, has been incorporated to manufacture brick and tile with a capital stock of \$10,000. Philip R. Rice is president; Southern R. Duval, vice-president; Gabriel Moulin De Grange, general manager, and Jonville Berugeay, secretary and treasurer.

New Orleans—Printing Works.—The Laudoumley & Boudousquie Printing Co., Limited, has been incorporated to operate printing works, etc., with a capital stock of \$500. Fernand L. Laudoumley is president; Pedro Gonzales, vice-president, and Chas. L. Boudousquie, secretary and treasurer.

New Orleans—Towing Company.—The Union Towing Co., Limited, has been incorporated with a capital stock of \$500 to operate towboats. T. A. Beck is president; Philip Hirsch, vice-president, and William Wenzel, manager.

New Orleans—Brush Factory.—The Crescent Brush Manufacturing Co. has been incorporated with a capital stock of \$30,000 for the purpose of manufacturing brushes of all kinds. George Lipser is president; Wm. J. Young, vice-president, and Fred W. Eicholz, secretary and treasurer.

New Orleans—Mineral Wells Company.—The Lowe Mineral Wells Co., Limited, has been incorporated for the purpose of acquiring mineral wells, etc. George Nicholson is president, and Samuel Fry, secretary; capital stock \$50,000.

New Orleans—Cultivation of Sugar-cane.—La Estancia Co. has been incorporated for the cultivation of sugar-cane, etc. J. P. Baldwin is president; Gayden Cage, vice-president, and J. M. Baldwin, secretary and treasurer; capital stock \$12,200.

New Orleans—Leather Manufacturing.—The Southern Leather Manufacturing Co. has been incorporated with a capital stock of \$250,000.

New Roads—Sugar Factory.—The Pointe Coupee Planting & Manufacturing Co., Limited, has been formed to erect a central sugar factory. C. M. Eismann is manager.

Plaquemine—Sugar-house, etc.—The Geo. M. Murrell Planting & Manufacturing Co., Limited, has been incorporated with a capital stock of \$200,000. Geo. R. Murrell is president, and Jno. D. Murrell, secretary. The company has purchased several sugar plantations, and will erect a new six-roller mill.

Smithland—Cottonseed-oil Mill.—J. G. Batchelor, O. Lacour, M. P. Phillips, James Innis, W. W. Mains, A. J. Lacour and Isidore Blum have incorporated the Innis Cotton Oil Co. to erect a cottonseed-oil mill, for which contract has been let. Its capital stock is \$35,000.

Thibodeaux—Water Works.—W. T. Corel, of Biloxi, Miss., contemplates constructing a water-works system in Thibodeaux.

Vidalia—Cottonseed-oil Mill.—The Standard Oil Co., of New York, will erect a cottonseed-oil mill at Vidalia at a cost of about \$100,000.

MARYLAND.

Baltimore—Canning Company.—David Kalb, Christopher Hidey, George Gettings, C. E. Upton and C. Frank Kalb have incorporated the Asbestos Canning Co. of Baltimore County with a capital stock of \$3,000.

Baltimore—Mantel Company.—W. H. Riddle, Robert H. Smith, Roland Bolgiano, Elisha Riddle

and Chas. J. Riddle have incorporated the W. H. Riddle Mantel Co. with a capital stock of \$10,000.

Baltimore—Land Company.—Oregon R. Benson, Richard H. and W. H. Edmonds, Chas. E. Harper and Isaac S. Field have incorporated the West Baltimore Land Co. with a capital stock of \$250,000.

Baltimore—Printing Works.—Jno. B. Kurtz, Chas. E. Smith, Wm. A. Krieger, Edw. M. Jeffries and Wm. H. Fisher have incorporated the Jno. D. Lucas Printing Co. with a capital stock of \$30,000.

Baltimore—Brick and Terra-cotta Works.—Edward W. Thompson, Herbert E. Gibson, James B. Guyton, Jno. McPhail and Patrick Flanagan have incorporated the Gibson Glazed Brick & Terra Cotta Co. with a capital stock of \$50,000.

Cambria—Land Company.—Wm. Ramsay, Hugh Ramsey and others have incorporated the Cambria Land Co.

Hagerstown—Electric-light Plant.—Contract for supplying the city with light has been let to J. C. Rogers, Edward Stanley and F. H. Clements, of New York.

Hyattsville—Electric-light, Heat and Power Plant.—L. D. Wine, Joseph A. Blundon, Chas. A. Wells, Henry M. Morrison, W. W. Smith and T. H. Smith have incorporated the Hyattsville Electric, Heat, Light & Power Co. to erect a general electric plant. Riverdale, Highlands and Bladensburg will be included by the company.

Oakland—Saw Mill.—G. W. Delawder has erected a saw mill near Oakland.

MISSISSIPPI.

Hattiesburg—Lumber Booms.—D. Draughman and J. T. Carter; the Dantzier Lumber Co., of Moss Point; Gautier & Sons, of West Pascagoula, will incorporate the Pascagoula Boom Co. to operate lumber booms.

Natchez—Manufacturing.—The New Era Manufacturing Co. has been incorporated with a capital stock of \$25,000.

Vicksburg—Sewerage System.—The city will construct a sewerage system.

West Point—Canning Factory.—The company lately mentioned as formed to start canning factory will be known as the West Point Canning & Manufacturing Co., with J. D. Evans as president.*

NORTH CAROLINA.

Charlotte—Cotton Mill.—The Alpha Mills will be enlarged and new machinery put in.

Charlotte—Cotton Mill.—New looms are being put in the Charlotte Cotton Mills.

Charlotte—Cotton Mill.—The Highland Park Manufacturing Co. is putting new looms in its mill.

Charlotte—Cotton Mill.—The Charlotte Cotton Mills will put in 150 looms.

Charlotte—Ice Manufacturing.—The Charlotte Ice & Coal Co. will put in a new 25-ton ice plant this summer.

Durham—Mercantile.—P. H. Massey, Rufus Massey and W. P. Hailey have incorporated the Durham Farmers' Alliance Merchandise Co. with a capital stock of \$5000. Its purpose is to deal in merchandise.

Gulf—Sandstone Quarry.—J. M. McIver has sold a sandstone quarry near Gulf to Norfolk parties, who will develop it.

High Point—Mercantile.—N. W. Beeson, E. D. and W. B. Steele have incorporated the Beeson Hardware Co. with a capital stock of \$10,000.

Mt. Airy—Tobacco Factory.—Moore, Loury & Yokely will establish a tobacco factory to pack 75,000 yearly. Machinery has all been purchased.

Raleigh—Cotton Mill.—R. S. Pullen and others are forming a company to build a cotton mill.

Statesville—Brick Works.—W. E. Morrison will manufacture brick.

Salisbury—Cotton Mill.—F. J. Murdoch and several others are endeavoring to organize a cotton manufacturing company with \$100,000 capital.

Sylva—Corundum Mines.—The New York Corundum Wheel Co. has organized the Western North Carolina Corundum Wheel Co. to open a corundum mine. The sum of \$150,000 has been invested in an equipment of machinery, and operations have commenced.

Wilmington—Saw Mill.—The Cape Fear Lumber Co. will build a mill at once. This company was reported last week as chartered under Norfolk, Va.

SOUTH CAROLINA.

Cheraw—Cotton Mill.—Commission to organize the Cheraw Cotton Mills has been issued. H. W. Finlayson, R. T. Caston, H. P. Duvall, W. R. Brantley and others are the incorporators. The company intends to erect a mill at once; capital stock \$50,000.

Hampton—Cotton Mill.—M. B. McSweeney and

W. F. Cummings are endeavoring to organize a company to build a cotton mill.

Marietta—Cotton Mill.—William Wilkins, of Greenville, is endeavoring to form a company to erect a cotton mill near Marietta.

Sumter—Machine Shop.—The Charleston, Sumter & Northern Railroad Co. is enlarging its Sumter machine shops, putting in a foundry, blast furnace, etc.

TENNESSEE.

Knoxville—Engine Works.—A company has been formed to establish engine works. M. F. Caldwell is president; J. M. Whittle, vice-president, and N. J. Tubbs, general manager. The engine to be made is the invention of Mr. Tubbs.

Knoxville—Foundry.—The Clark Foundry Co. contemplates manufacturing stoves.

Nashville—Crematory.—The city contemplates erecting a garbage crematory. The mayor can inform.

Union City—Flour Mill.—The Union City Grain Co. will rebuild its flour mill reported in this issue as burned.

TEXAS.

Abilene—Cottonseed-oil Mill.—The Abilene Oil Manufacturing Co. has been organized to erect a 50-ton cottonseed-oil mill. C. O. Morris, J. H. Eaton, C. W. Warren, O. W. Stebbins and others comprise the company.

Austin—Ship-yards.—James Parks, of Lake Charles, La.; Jno. Weaver, Marks Marx, Harris Kempner, of Galveston; R. V. Tompkins and T. W. Tompkins have incorporated the Lynchburg Shipbuilding & Repairing Co. with a capital stock of \$4000.

Bruceville—Cottonseed-oil Mill.—M. L. Board, H. C. Blackwell, G. B. Harris, E. R. Tatum and L. P. Field have incorporated the Bruceville Cotton Oil Co. to erect a cottonseed-oil mill. Their capital stock is \$50,000.

Dallas—Electric Manufacturing Company.—W. L. Steele, H. M. Sutton and N. A. Searcy, of Dallas; C. A. Ginocchio, A. W. Siquaigo and C. J. Siquaigo, of Marshall, and J. B. Laufer, of Fort Worth, have incorporated the Steele Electric Manufacturing Co. with a capital stock of \$100,000.

Gonzales—Cotton Mill.—T. S. Walker contemplates building a cotton mill.

Houston—Shirt and Pants Factory.—The Lone Star Shirt & Pants Co. has started a factory. Leon Smith is manager.

Houston—Mattress Factory.—The Houston Heights Mattress Factory, reported in this issue as burned, will be rebuilt.

Houston—Electric Company.—Scott Van Etten, L. M. Kilburn and D. D. Colley have incorporated the Houston General Electric Co. with a capital stock of \$30,000.

Houston—Brewery.—The American Brewing Association, reported last week as chartered, will operate the brewery now being erected in Houston by the Anheuser-Busch Association.

Houston—Oil Refinery.—J. B. Barker, D. F. Stuart, E. W. Sewall, O. L. Cochran, C. Lombardi and others have incorporated the Houston Oil Refinery & Manufacturing Co. with a capital stock of \$100,000.

Midlothian—Water Works.—Contract has been let to L. B. Entry for the sinking of an artesian well to supply the city with water.

San Marcos—Cotton Mill, Oil Mill and Bating Factory.—T. S. Diffee has purchased a water-power near San Marcos, on which he intends building an oil mill, a bating factory and a cotton mill.

Troup—Canning Factory.—A company has been organized for the purpose of establishing a canning factory. R. H. Small is president; J. G. Jones, secretary, and O. P. Jarvis, treasurer.

Tyler—Railroad Shops.—The St. Louis & Southwestern Railway will enlarge its Tyler machine shops.

Yoakum—Cotton Gin.—C. L. Strieber, Sr., will erect a cotton gin.

Yoakum—Cigar Factories.—A Mr. Buerger and Frederick Riedel will each start cigar factories.

VIRGINIA.

Claremont—Cigar Factory.—S. F. Snell has started a cigar factory.

Richmond—Flour Mill.—The Gem Roller Mills, reported in this issue as burned, will be rebuilt.

WEST VIRGINIA.

Beverly—Coal Mines and Coke Ovens.—George E. Walters, C. W. Thompson and Alex. Boguy, of Brooklyn, N. Y.; R. C. Budd, of New York city, and T. H. Gimbernot, of Orange, N. J., have incorporated the Randolph Coal & Coke Co. to mine coal and manufacture coke. The capital stock is \$5000.

Bluefield—Plumbing Company.—E. E. Winters, C. Knight, C. Wakers, Edward Bartholomew and H. T. Mercer are the incorporators of the Blue-

field Plumbing & Heating Co., reported last week. Their capital stock is \$6000.

Charleston—Furniture Company.—C. Truslow, F. A. Hanna, M. A. McGlorson, C. B. Truslow and Wm. Ruffner are the incorporators of the Truslow Furniture Co., reported last week. Their capital stock is \$7000, with privilege of increasing to \$100,000.

Charleston—Manufacturing.—A new company for the manufacture of a recently patented contrivance for the better lubrication of car-axle boxes has been chartered. The company is composed of J. N. Patton, of Rome, Ohio; Albert Egerly, of Hagerstown, Md.; Albert R. Morrison, of Buena Vista, Ohio; D. B. Sacks, of Cincinnati, Ohio; and Melville J. Cook, of Hinton, W. Va. It is stated, but not on the direct authority of the incorporators, that a factory for the manufacture of the appliance will be erected either in Hinton, W. Va., or near Charleston.

Fairmont—Creamery.—D. B. Fleming, of Fairmont; Calder Brice, of Eldera; Jos. E. Sands and others have incorporated the Marion County Creamery Co. to establish a creamery.

Fayetteville—Publishing Company.—J. H. Gaines, C. W. Dixon, A. W. Hamilton and others have incorporated the Journal Printing & Publishing Co.

Hunterville—Saw Mill.—Jno. T. McGraw and others will build a saw mill.

Parkersburg—Engine Works.—C. W. Robinson, A. C. Bruce, C. H. Shattuck, A. S. Robinson and J. G. McClure have incorporated the Parkersburg Engine Foundry Works with a capital stock of \$20,000.

Sistersville—Oil Company.—Wm. Carr, of Zanesville, Ohio; Geo. B. Carr, C. F. Lake and A. C. Haxton, of Siturville, Pa., and W. W. Morrison, of Harmony, Pa., have incorporated the Fearless Oil Co. with a capital stock of \$300,000.

Vadis—Mill.—The Vadis Mill is being equipped with new machinery.

Wheeling—Conveyor Company.—B. F. Quilling, Thomas J. Johnson, M. M. McCollin and others, of Cleveland, Ohio, have incorporated the McCollin Conveyor & Transfer Co.

BURNED.

Burgin, Ky.—Dowling Bros.' distillery.

Houston, Texas.—The Houston Heights Mattress Factory.

Louisville, Ky.—The Hagan Manufacturing Co.'s factory.

Marietta, Fla.—The Marietta Phosphate Works.

Richmond, Va.—The Gem Roller Mills; loss \$20,000.

Union City, Tenn.—The Union City Grain Co.'s mill; loss \$30,000.

BUILDING NOTES.

Baltimore, Md.—Warehouses.—William Ferguson will build several warehouses.

Baltimore, Md.—Church.—It is contemplated to build a new edifice for St. Barnabas Church at an estimated cost of \$40,000. Rev. Joseph Fletcher, 624 West Biddle street, can be addressed.

Baltimore, Md.—W. J. Clendennin has permit to erect eight three-story buildings; J. B. Deford, thirteen two-story buildings; W. M. Bowen, two three-story houses; E. B. Hunting, two three-story houses, and Thomas E. Bond, five three-story houses.

Baltimore, Md.—Warehouse.—Joseph M. Cone will erect a five-story warehouse 30x100 feet.

Crowley, La.—Church.—The Presbyterians will shortly award contract for a new church. George Fraser can inform.

Crowley, La.—Jail.—Dr. B. E. Clark will receive plans and specifications until May 8 for the erection of a brick jail not to exceed in cost \$8,000.

Fayetteville, N. C.—Courthouse.—The plans of Bruce & Morgan, of Atlanta, Ga., have been adopted for the new courthouse to be built by Cumberland county.

Fontainebleau, Miss.—Hotel.—The building of a large hotel is contemplated. J. R. Harkness, of Biloxi, can give particulars.

Gadsden, Ala.—Church.—The plans of A. D. Simpson have been adopted for the church to be built by the Baptists. It will cost about \$15,000 and contract will be let soon. Rev. H. W. Williams can be addressed.

Galveston, Texas—Church.—The members of the First Presbyterian Church will build a new edifice.

Griffin, Ga.—City Hall.—A site has been selected for the new city hall and courthouse. It will cost about \$50,000. The mayor can give particulars.

Hartley, Texas.—Contract will shortly be awarded for building a jail. Ben Lawson can give particulars.

Hogansville, Ga.—Hotel.—J. H. Clopton reports that the erection of a \$10,000 hotel is contemplated.

Houston, Texas.—W. D. Cleveland & Co. will erect a business building.

Houston, Texas.—L. Bryan & Co. will erect sixty dwellings on the fair-ground addition.

Huntsboro, Ala.—Warehouse.—The building to be erected by T. S. Davis, of Montgomery, lately mentioned, will be a cotton warehouse.

Inter Lachen, Fla.—Hotel.—A new hotel will be built to replace the Hotel Lagonda, lately burned. Charles A. Knapp can inform.

Lockhart, Texas—Courthouse.—Caldwell county will build a new courthouse to cost between \$40,000 and \$65,000, and plans will be adopted on April 27. John Clark can be addressed.

Louisville, Ga.—Hotel.—The Louisville Investment Co. contemplates building a hotel.

Memphis, Tenn.—Calvary Church will build a parish house. Rev. F. P. Davenport can inform.

Nashville, Tenn.—W. H. Jackson and Justice Jackson contemplate erecting a seven-story and basement building; work is to commence about January 1, 1894. It will be planned for stores, flats and offices.

New Orleans, La.—Warehouse.—George W. Van Horn has been awarded contract to build the warehouse for Charles W. Ziegler. It will be a five-story structure 155x145 feet, with endless chain elevators, etc., and cost about \$55,000. Charles W. Charlton, Jr., is the architect.

Opelika, Ala.—Hotel.—C. J. Sudduth has been awarded contract for the erection of a three-story hotel for the Messrs. Cooper. It will cost about \$50,000.

Orangeburg, S. C.—Church.—The members of St. Paul's Methodist Episcopal Church will build a new edifice. Rev. C. B. Smith can be addressed.

Scottsburg, Va.—College.—A college will be built. Rev. S. H. Thompson, of South Boston, can give particulars.

Selma, Ala.—Church.—The members of Broad Street Presbyterian Church will build a church to cost about \$35,000. W. R. Nelson can inform.

Stanley, Va.—Hotel.—D. L. Mauck will build a hotel.

Staunton, Va.—Hotels.—Collins & Hackett prepared the plans for the four-story hotel mentioned in last issue as to be built by C. T. Palmer. It will have thirty-six rooms and cost \$15,000. They have also prepared plans for a four-story brick hotel for Frank Eakle. It will have fifty-two rooms, steam laundry, etc., and cost about \$15,000.

Tampa, Fla.—Church.—The church to be built by the Presbyterians will be a Gothic structure, with a 96-foot tower, and cost about \$5000. Contract will be let by May 1. M. J. Miller prepared the plans.

Texarkana, Ark.—Courthouse.—Miller county will build a \$35,000 courthouse. J. M. Montgomery can be addressed.

Valdosta, Ga.—Church.—The Baptists will build a church.

RAILROAD CONSTRUCTION.

Railroads.

Ashton, Md.—The Ashton & Clarksville Electric Railway Co. has been incorporated to build an electrical railroad from Ashton to Clarksville, forming part of the proposed electrical railroad from Baltimore to Washington.

Beaumont, Texas.—The required bonus of \$40,000 for the Gulf, Beaumont & Kansas City Railroad has been about secured. John H. Kirby, of Houston, vice-president of the road, has, it is stated, arranged for building seventy-five miles of the line.

Charleston, W. Va.—The Roaring Creek & Charleston Railroad Co. has been incorporated by Sam B. Diller, John D. Skiles and W. F. Diller, Lancaster, Pa.; O. C. Womelsdorf, Pottsville, Pa., and Daniel P. Baker, Beverly, W. Va. The company intends building a railroad from the mouth of Roaring creek in Randolph county to Charleston. The capital stock is \$3,000,000.

Ellicott City, Md.—The Ellicott City & Clarksville Railroad Co. has been incorporated by John G. Rogers, Harper Carroll, John F. McMullen, John L. Clark and John H. Owings to build an electrical railroad from Ellicott City to Clarksville, forming part of the proposed electrical railroad from Baltimore to Washington. The capital stock is \$200,000.

Five Forks, Ga.—James M. Smith, of Oglethorpe, will probably soon commence building a railroad from Five Forks to Danielsville, a distance of about twelve miles.

Fort Worth, Texas.—The negotiations pending for securing the Chicago, Rock Island & Pacific Railroad for Fort Worth have been consummated. Contracts are let for grading part of the road south from Bowie, and the remainder of the line will soon be under contract. Tracklaying will be commenced at once at Bowie.

High Springs, Fla.—The South Florida Railroad Co. (office, Sanford) has completed the grading and tielaying on about seventeen miles of its extension from High Springs to Dunnellon, and tracklaying begins shortly.

Lake Charles, La.—The Teche Railroad & Sugar Co., incorporated with Dr. Seaman A. Knapp, president; George Horridge, vice-presi-

dent, and Bradford Knapp, secretary, intends building a railroad from Huron plantation in St. Martin's parish to some point on the Bayou Courtableau and thence to some point on the Louisiana & Western Railroad. The capital stock is \$1,000,000.

Sulphur Springs, Ark.—The Kansas City, Pittsburg & Gulf Railway Co. has, it is reported, purchased the Kansas City, Fort Smith & Southern road, running from Joplin, Mo., to Sulphur Springs, Ark., twenty-five miles of which, however, are uncompleted. The company has, it is stated, awarded contract for completing these twenty-five miles and for building the line to the Arkansas river. The object of the Kansas City, Pittsburg & Gulf Railway Co. is to build a railroad from Kansas City, Mo., to Sabine Pass, Texas. G. N. Wilson, of Kansas City, Mo., can give particulars.

Tampa, Fla.—A bill has been introduced in the legislature to incorporate the Tampa & Western Railroad Co.

Tampa, Fla.—A bill has been introduced in the legislature to incorporate the Tampa Suburban Railroad Co.

Street Railways.

Augusta, Ga.—The Augusta Railway Co. may extend its Harrisburg line to Lake View Park.

Charleston, S. C.—The Enterprise Street Railroad Co. has applied to the city council for a franchise to operate its lines by electricity.

Hagerstown, Md.—Rodgers, Shanly & Co., of New York city, who have franchise to build an electrical railroad in Hagerstown, will commence work within thirty days. W. R. Warfield is engineer in charge.

Tallahassee, Fla.—The city council has granted the Tallahassee Street Railway Co. the right to operate its system by electricity.

MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Bag Machinery.—The Southern Phosphate Works, Macon, Ga., want prices on machinery for manufacturing bags.

Basket and Crate Machinery.—Cohn & Rock, Princess Anne, Md., will possibly want crate and basket machinery.

Belting.—Andrew Schulze, Lott, Texas, wants belting.

Boiler.—The West Point Canning & Manufacturing Co., West Point, Miss., wants a twenty-five horse-power boiler (upright); J. D. Evans, president.

Broom Factory.—Loomis Manufacturing Co., Fernandina, Fla., wants estimates for a complete outfit for broom factory.

Burring Machine.—Crowell Mikesell, Winchester, Ark., wants to buy a machine for separating burrs from sheep's wool.

Canning Factory.—The West Point Canning & Manufacturing Co., West Point, Miss., wants full outfit for first-class canning factory; J. D. Evans, president.

Canning Machinery.—A. M. Notgrass, manager, Pulaski, Tenn., wants machinery for canning factory of 3000 to 5000 cans daily.

Cottonseed-oil Mill.—H. H. Davis, Tennesse, Ga., wants to purchase outfit for cottonseed-oil mill.

Cottonseed-oil Mill.—Machinery for cottonseed-oil mill will be purchased at Abilene, Texas. J. M. Carter can be addressed.

Crusher.—W. M. Lundy, Max Meadows, Va., wants a rock crusher.

Distilling Apparatus.—O. H. Brewster, Oviedo, Fla., wants apparatus of about five to ten gallons capacity for distilling water.

Drill Machine.—B. F. Meffert, Lowell, Fla., wants a drill machine.

Drill Machinery.—W. M. Lundy, Max Meadows, Va., wants drill machinery.

Dry-kilns.—The Holly River Co. will want dry-kilns. J. E. Craddock, Buckhannon, W. Va., can be addressed.

Electric-light Plant.—Andrew Schulze, Lott, Texas, wants a small electric-light plant.

Engine.—Andrew Schulze, Lott, Texas, wants an eighty-horse-power engine.

Handle Machinery.—The Stevenson Manufacturing Co., Hickory, Miss., wants handle machinery.

Pipe, etc.—E. M. Hodges, Kinston, N. C., wants pipe and fittings.

Planing Mill.—The Holly River Co. will want machinery for planing mill. Address J. E. Craddock, Buckhannon, W. Va.

Pulleys, etc.—Andrew Schulze, Lott, Texas, wants pulleys and shafting.

Pump.—E. M. Hodges, Kinston, N. C., wants a duplex pump (second-hand will do).

Saw Mill.—The Holly River Co. will want machinery for saw mill. Address J. E. Craddock, Buckhannon, W. Va.

Shingle Mill.—Fred W. Howard, Fernandina, Fla., wants information as to cost of a shingle mill with a capacity of from 50,000 to 100,000 daily.

Spoke Machinery.—The Stevenson Manufacturing Co., Hickory, Miss., wants spoke machinery.

Threshing Machines.—The Tarboro Iron & Machine Works, Tarboro, N. C., wants to correspond with manufacturers of grain separators or threshing machines.

A first-class telephone exchange is wanted in Rome, Ga. Any new company desiring to establish one can obtain information by addressing John C. Printeys, P. O. Box 181.

E. E. Titus, of Petersburg, Va., wants to correspond with manufacturers of brass wire.

Geo. W. Bennett, Bennettsville, S. C., wants to correspond with manufacturers of buckles, bridle-bits, snaps, rings, etc.

The West Point (Miss.) Canning & Manufacturing Co. wants prices on 200,000 three-pound cans, 100,000 two-pound cans, 200,000 (stock) three-pound cans knocked down in shop, ready to put together, and 100,000 two-pound cans, same condition. Address J. D. Evans, president.

SOUTHERN FINANCIAL NEWS.

New Banks.

Chestertown, Md.—A savings bank will be started with a capital stock of \$20,000.

Elberton, Ga.—The Bank of Elberton will shortly commence business.

Fort Worth, Texas.—The National Stockyard Bank of Fort Worth is to be organized with H. W. Tallant, president. The capital stock will be \$250,000.

Hillsboro, Texas.—The Citizens' National Bank has been organized with George Carmichael, president; A. T. Rose, vice-president, and J. J. Yerby, cashier. It will begin business May 1. The capital stock is \$50,000.

Judsonia, Ark.—A bank will probably be organized.

Louisville, Ga.—The Louisville Bank will commence business with W. S. Williams, president, and L. R. Farmer, cashier.

Martinsville, Va.—The bank referred to in last issue as to succeed the Henry County Bank has been chartered as the Farmers' Bank of Martinsville. Henry C. Lester is president, and R. L. Woolfolk, cashier.

Melbourne, Fla.—The Melbourne State Bank has been organized with J. H. Phillips, president, and E. P. Branch, cashier. The directors are these officers and George R. Lyon, of Waukegan, Ill.; P. W. Heins, of Olivia, Minn., and G. L. Lucas, of Eden, Fla.

New Orleans, La.—A savings bank will be organized by Henry Wellman, John Fitzpatrick, G. W. Stockton and others. The capital stock is to be \$100,000.

Orangeburg, S. C.—As stated in last issue, the Edisto Savings Bank will increase its capital stock to \$120,000.

Palm Beach, Fla.—The Dade County State Bank will shortly commence business.

West Union, W. Va.—The West Union Bank, referred to in last issue, was incorporated by W. B. Maxwell, P. M. Robinson, of Clarksburg; L. W. Pearcey and others. The capital stock is \$35,000.

Williamson, W. Va.—The Bank of Williamson has commenced business with Dr. G. W. Lawson, president, and H. Williamson, cashier. The capital stock is \$50,000.

Alexandria, Va.—The Alexandria Perpetual Building Fund Association has declared a semi-annual dividend of 8 per cent.

Attalla, Ala.—The Attalla Co-operative Loan and Manufacturing Association will be organized.

Augusta, Ga.—The Irish-American Investment Co. has declared a dividend of 8 per cent.

Columbia, S. C.—An election will be held on May 15 to vote on the issuance of \$50,000 of college bonds.

Easton, Md.—The Workingmen's Permanent Building and Loan Association has declared a semi-annual dividend of 3 per cent.

Griffin, Ga.—The city contemplates issuing \$50,000 of city hall bonds.

Little Rock, Ark.—The Commercial Building Trust, of Louisville, Ky., has established a branch in Little Rock.

Nashville, Tenn.—Davidson county has sold

\$200,000 of county asylum 5 per cent. bonds to N. W. Harris & Co., of Chicago, Ill. They run 10, 15 and 20 years.

Nashville, Tenn.—W. J. Hayes & Co., of Cleveland, Ohio, has purchased \$400,000 of 4½ per cent. 30-year sewer bonds.

Nashville, Tenn.—The Mechanics' Savings Bank & Trust Co. is reported as making an assignment. The liabilities are \$150,000, and the assets are placed at \$250,000.

New Orleans, La.—The Crescent Loan and Savings Association has been incorporated by Mathias Frisch, Frank F. Wolfley, Adam Kober and others. The capital stock is \$50,000.

New Orleans, La.—The St. Charles Street Railroad Co. has declared a dividend of 2 per cent.

Rome, Ga.—A branch of the Southern Building and Loan Association has been established with E. T. McGhee, president. The New South Building and Loan Association has organized a branch with John T. Black, president.

TRADE NOTES.

THE Pharr Phosphate Co., of Bartow, Fla., has placed an order with Hughes & Chisolm, of Charleston, S. C., for a large washboat for washing the output of its extensive mines. This washboat is being constructed with the purpose of making it a model machine of its class for completeness. The centrifugal pumps made by this firm, designed especially for phosphate miners, are receiving flattering recognition.

THE J. A. Fay & Egan Co., of Cincinnati, Ohio, has tendered its friends and patrons an invitation to visit its exhibits in machinery hall, World's Fair, Chicago, Ill., where there will be displays of woodworking machinery of decided interest and value, as these concerns propose to show mechanisms of the highest character and of the most advanced type to produce woodwork in the largest quantity with the greatest advantage, convenience and economy. Many novelties can be seen in operation.

THE Fidelity Steam Trap Co., 203 S. Canal street, Chicago, is well known as a manufacturer of high-grade engineering appliances. Its specialty is the Fidelity steam trap, the economy of which is recognized by engineers. Because of their complex mechanism it has not, it seems, been an easy matter to find a trap that would work under all conditions. The Fidelity Company claim that it has such a trap, and its offer to send it on thirty days' trial with a year's guarantee evidences the confidence reposed in its merits.

AMONG the many buildings equipped during the past two months with the swinging hose-rack, manufactured by John C. N. Guibert, 115 Broadway, New York, were: The Hotel Colorado, Glenwood Springs, Col., twenty; the Art Institute, Chicago, Ill., sixteen; the Society of Savings Building, Cleveland, Ohio, two; Taunton (Mass.) Theatre, five; Lloyd's Opera-House, Jamestown, N. D., four; New England Building, Boston, Mass., seven; Wallace Block, Fitchburg, Mass., six; Pierce Manufacturing Co.'s cotton mills, New Bedford, Mass., three; Diamond Match Co., Detroit, Mich., ten; Toronto (Ont.) Street Railway, two.

THE Globe Dry-Kiln Co., of Meridian, Miss., reports these recent sales of its improved kiln: C. W. Rich, Richburg, Miss., a 40,000 capacity kiln, said to be the largest kiln in the South; J. F. Shackelford, Meridian, Miss.; J. H. Geary, Siding, Miss.; W. J. Van Zandt, Arcola, La., and Ackenhause & Bros., Ellisville, Miss. It reports other large contracts in view which will be closed in a few weeks and business generally much better than usual. Trade had been rather dull up to a month ago and collections hard, but the outlook is now much better than this company expected. The improved kiln it is now manufacturing has evoked many favorable comments and promises to attain general popularity.

EX-PRESIDENT HARRISON, whose handwriting is as clear, precise and neat as that of a woman, said, after writing his annual message with a lead-pencil, "My thoughts flow more freely from the pencil." Other eminent men who have felt the weight of great responsibilities have been conscious of nervous irritation, mental friction and general exhaustion when using a pen, and an almost entire freedom from such ills when using a pencil with a smooth and easy yielding lead. General Grant, in writing his important papers, used a Dixon "American Graphite S M" and commended it for its unequalled qualities. The use of a lead-pencil has saved many a writer from penman's cramp, and made it possible to do better work with greater ease.

THE "Lancaster" grapples were lately selected by the War Department for the digging machinery at the Sandy Hook (N. J.) proving ground. They are manufactured by James H. Lancaster, of 141 Broadway, New York city. Mr. Lancaster lately secured contract for the entire

rock-crushing and screening plant for the Elliott F. Sheppard estate at Scarborough-Hudson, N. Y. He is now delivering two granulators and one large crusher to Messrs. Sutphen Bros. & Yale, Bolton Landing, Lake George, N. Y. This plant is for the mining and reduction of platinum ore. Recent shipments included a crusher to the Fisher Lime & Stone Co., Eaton, Ohio; an ore granulator to the Superior Stone Co., Dayton, Ohio; a granulator to the Waltham Dial Co., Waltham, Mass., for reducing silica for watch dials; a No. 3 crusher (a second one) to S. D. Tice, Howard, Centre county, Pa., and another to Hawke Bros., Tunkhannock, Pa. One was also recently shipped to W. H. Turrentine, Burlington, N. C.

THE J. R. Alsing Co., of New York city, manufacturer and dealer in all kinds of crushing, grinding and pulverizing machinery, reports that the sole agency of the Abbe mill has been a very satisfactory acquisition. In the one year that this mill has been on the market the company has sold to the following concerns: Franklin Sugar Refining Co., Philadelphia, Pa., one; Spreckels Sugar Refining Co., Philadelphia, Pa., three; American Sugar Refining Co., Jersey City, N. J., one; Mollenhauer Sugar Refining Co., Brooklyn, N. Y., two; American Sugar Refining Co., Brooklyn, N. Y., two; Francis H. Leggett & Co., New York city, one; Bunte, Frank & Co., Chicago, Ill., one; S. L. Roskam & Co., Philadelphia, Pa., one, all for the purpose of pulverizing sugar; Croft & Allen Co., Philadelphia, Pa., one, for powdering cocoa shells; New York Carbon Works, Newark, N. J., one, for grinding carbon; Wm. H. H. Roberts and D. R. James & Bros., New York city, one each, for powdering drugs, roots, etc.; Ternollie Chemical Works, Charleston, S. C., one, for grinding chemicals; National Starch Manufacturing Co., Glen Cove, N. Y., two, for grinding gluten meal and starch; William Lang & Son, Philadelphia, Pa., one, for grinding rock candy; Standard Fertilizer Co., Boston, one, for grinding charred bones. The vast range covered by this mill, opening the opportunity to offer the same to almost every industry, makes it a valuable device.

TRADE LITERATURE.

THE specialties manufactured by Emmerich & Vonderlehr, of 191 Worth street, New York city, are covered in an illustrated catalogue published by that firm. The contents include illustrated descriptions of the latest improved Emmerich bronzing machine, lithographic stone grinding machine, card bronzing machine, embossing and roughening machine and revolving sieve.

THE Van Wagoner & Williams Co., New York and Cleveland, extensive manufacturers of spring hinges, has been compelled to add another floor to its New York warerooms at 14 Warren street, that city. Its rapidly-increasing business necessitates this enlargement in order that it may carry a stock which will enable it to fill city and Eastern orders promptly.

"CIRCULATION AT THE AMERICAN INSTITUTE FAIR" is the title of an interesting publication issued by the Model Heating Co., of 144 North Second street, Philadelphia, Pa. This company displayed at the fair a number of working models in glass and metal illustrating to the eye of the spectator the efficiency of its system. This pamphlet gives a detailed account of the exhibit, with a number of illustrations.

AN attractive paper-weight comes from the New Castle Wire Nail Co., New Castle, Pa. It is of glass and encloses a bird's-eye view of the extensive works of this concern, showing the wire-nail factory, wire-rod mill, blast furnaces and Bessemer steel plant. On the reverse side is given the annual capacity of the works. The figures are suggestive of the magnitude of this company's operations.

AN unique method of expressing complete confidence in the utility and quality of one's wares has been hit upon by George S. Comstock, of Mechanicsburg, Pa., manufacturer of farm implements. The conceit is an insurance policy in which the holder, who necessarily is a patron of Mr. Comstock, is assured that the financial and other benefits directly accruing from the use of his goods are fully worth a considerable sum.

THE 1893 catalogue of the Globe special castings for water works, etc., manufactured by the Builders' Iron Foundry, Providence, R. I., is received. The general form of these castings is that of a sphere or globe, with bells attached. This spherical form avoids, it is believed, all useless accumulations of metal, and offers great resistance to bursting strains. It renders the castings comparatively light and compact, advantages of important consequence. There are more than 250 varieties of these specialties listed, and those for which there are much demand are kept in stock by the manufacturer. These specials, although placed on the market only within recent years, now number over 400 institutions as regular patrons.

TABLE OF CONTENTS.

	Page.
The Iron Ores of North Carolina. I.....	211
A Large Mining and Development Company Incorporated.....	212
A New Field for Electricity.....	212
New Dredges for the Florida Coast Canal.....	212
The Harbor of Charleston, S. C.	212
Proposed Removal of the Gates Desk Co. to Augusta, Ga.....	212
A Proposed River Transportation Company.....	212
Industrial Development at Meridian, Miss.....	213
A New Brick Warehouse in New Orleans.....	213
The Planters' National Bank Building in Richmond (Ill.).....	213
Officers of the New Bank in New Orleans.....	213
General Notes.....	214
Mexican Notes.....	214
RAILROAD NEWS:	
Railroad Development in West Virginia.....	215
Norfolk & Western's Report.....	215
A Brighter Outlook for the Terminal.....	215
Chicago-St. Louis Electrical Railroad.....	215
Southern Railroad Notes.....	215
PHOSPHATES:	
First Quarter's Shipments of Florida Phosphates.....	216
Phosphate Developments in Columbia County.....	216
Pebble Phosphate Matters.....	216
A New Phosphate Company Organized.....	216
Organization of Pebble Phosphate Miners.....	216
An Interesting Experiment with Fertilizers.....	216
Phosphate Markets.....	216
Phosphate and Fertilizer Notes.....	217
COTTONSEED OIL:	
Cottonseed Oil in Holland.....	217
The Cottonseed-Oil Market.....	217
The Season's Work of the Dillon (S. C.) Mill.....	217
Cottonseed-Oil Notes.....	217
EDITORIAL:	
A Plan for Stimulating Southern Immigration.....	218
The Importance of Municipal Sanitation.....	218
The Present and Future of Gas and Electricity.....	219
Exploration of the Indiana Gas District.....	219
TEXTILES:	
Work Commenced on the Columbia Mills.....	220
Another Mill Contemplated at Marietta, S. C.....	220
A New Mill at Chester, S. C.....	220
A New Open-Shed Loom (Illus.).....	220
Southern Textile Notes.....	220
MECHANICAL:	
The Automatic Railway Pump (Illus.).....	221
The Fort Worth (Texas) Stockyards Co.....	221
LUMBER:	
Annual Meeting of the Texas Lumbermen's Association.....	222
Meeting of Lumber Manufacturers in Nashville.....	222
A New Band Saw (Illus.).....	222
Improved Double Circular Sawing Machine (Illustrated).....	223
Southern Lumber Notes.....	223
Lumber Market Reviews:	
Baltimore.....	223
Norfolk.....	223
Charleston.....	224
Savannah.....	224
Pensacola.....	224
Mobile.....	224
New Orleans ..	224
Beaumont.....	224
Iron Market Reviews.....	224
Southern Iron Notes.....	224
Cotton Market.....	225
Cumberland Coal Shipments.....	225
Coal and Coke Notes.....	225
Trade Notes.....	225, 226
CONSTRUCTION DEPARTMENT:	
New Enterprises.....	226
Building Notes.....	227
Railroad Construction.....	227
Machinery Wanted.....	227
Southern Financial News.....	227
Trade Literature.....	228

Housac Tunnel Route.

Those who travel select their route, and we earnestly commend the Fitchburg Railroad as one of the most attractive. The scenery is one continuous panorama of beauty, especially through the famous Deerfield valley. Other localities are beautiful in spots, but the charm of this route lies in the fact that there are no long uninteresting stretches of landscape, with only occasional views that are worth seeing, but in every direction the eye is filled with the varied beauty of river, mountain and smiling valleys. For miles the road follows the winding course of the Deerfield river, and on either side of the car there is a constantly shifting scene of dimpling waters girt about with the grandeur of the everlasting hills. We have taken this journey at different seasons of the year—in mid-winter, when the dazzling white of the snow made an artistic contrast with the dark green of the solemn pines; in the heat of mid-summer, and in the glories of autumn—and of all the months in the year September and October, when the trees take on their most gorgeous coloring, are the most favorable for seeing this section of New England at its best. The service, too, on this road is excellent and the accommodations first-class in every respect. It also possesses the advantage of being the most direct route to or from the West.

23 WALL STREET, NEW YORK, APRIL 12th 1893
MESSRS. WM. P. CLYDE, GEORGE F. STONE, WM. E. STRONG, J. C. MABEN and THOMAS F. RYAN, Present.

GENTLEMEN: Referring to your favor of Feb. 2, 1893, and our answer of the same date, we would say that we have carefully re-examined the affairs of the Richmond Terminal System, including its subordinate companies, and we believe that their reorganization is practicable on a sound financial basis that will be equitable and prove to the ultimate advantage of all security holders.

We are prepared to act on your request, and will be ready to announce an agreement and plan of reorganization, and to form a syndicate to underwrite the same, as soon as the several classes of securities of the Terminal Company, viz: Six per cent. Bonds, Five per cent. Bonds, Preferred Stock and Common Stock shall, pursuant to your letter of Feb. 2, have been deposited with us in amounts sufficient to demonstrate that the holders of such securities generally join in your desire that we shall undertake the work of reorganization.

It must be understood that we are given full authority to include any of the securities of the Terminal Company, so deposited, in the plan, when announced, and that each depositor, by his deposit gives such authority and his consent that all the terms and provisions of the plan, together with assessments on deposited stock, shall be discretionary with us.

As we presume that you will communicate the contents of this letter to all holders of Richmond Terminal stock and bonds, we would further say that, in such event, we shall be prepared on and after Monday, April 17, 1893, to receive at our office, No. 23 Wall Street, deposits of Richmond Terminal securities, as above, and to give our temporary receipts for the same in negotiable form.

Upon announcement of the plan, these temporary receipts will be exchangeable for our reorganization certificates, countersigned by the Central Trust Company, which Company will be the custodians of the securities delivered to us for the purpose of the reorganization.

Yours very truly,
(Signed) DREXEL, MORGAN & CO.

TO THE HOLDERS OF THE
SIX PER CENT. TRUST BONDS,
FIVE PER CENT. TRUST BONDS,
PREFERRED STOCK,
COMMON STOCK,

OF THE
Richmond & West Point Terminal
Railway & Warehouse Co.

Referring to the foregoing letter from Messrs. Drexel, Morgan & Co., we hereby recommend all holders of the above securities to deposit same with Messrs. Drexel, Morgan & Co., 23 Wall Street, New York, at once—and in no event later than May 1, 1893—in order to assure them of your co-operation and to enable them to proceed with the reorganization with the least possible delay.

Such a course is, in our opinion, essential for the protection of your interests.

WILLIAM P. CLYDE,
GEORGE F. STONE,
SAMUEL THOMAS,
WILLIAM E. STRONG,
J. C. MABEN,
THOMAS F. RYAN.

RICHMOND & WEST POINT TERMINAL
RAILWAY & WAREHOUSE COMPANY.

Whereas, The foregoing letter to and recommendation by security holders have been laid before this Board for its information.

Resolved, That this Board recommends the holders of all classes of securities of this company to deposit them immediately with Messrs. Drexel, Morgan & Co., on the terms and for the purposes named in their letter.

E. K. LYNCH, W. G. OAKMAN,
Assistant Secretary. President.